

NO. 398,250

PHILLIS T. ROTHGEB,
INDIVIDUALLY AND AS THE
ADMINISTRATRIX OF THE ESTATE
OF JOHN R. ROTHGEB, DECEASED,
JOHN R. ROTHGEB, JR., AND
DAVID THOMAS ROTHGEB

IN THE DISTRICT COURT

VS.

TRAVIS COUNTY, TEXAS

THE AMERICAN TOBACCO COMPANY,
PHILIP MORRIS INCORPORATED, PONCA
WHOLESALE MERCANTILE COMPANY,
H.E. BUTT COMPANY, THE TOBACCO
INSTITUTE, INCORPORATED
AND THE COUNCIL FOR TOBACCO
RESEARCH-U.S.A., INC.

261ST JUDICIAL DISTRICT

REPORTER: SALLY KING, CSR

DATE TAKEN: SEPTEMBER 23, 1988

ORAL DEPOSITION
OF
ROBERT ALEX PAGES, PH.D.
VOLUME I

**Kornegay-Carroll
And Associates**

COURT REPORTERS

106 E. SIXTH ST., SUITE 350
AUSTIN, TEXAS 78701
512/476-3967

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NO. 398,250

PHILLIS T. ROTHGEB, IN THE DISTRICT COURT
INDIVIDUALLY AND AS THE
ADMINISTRATRIX OF THE
ESTATE OF JOHN R. ROTHGEB,
DECEASED, JOHN R. ROTHGEB,
JR. AND DAVID THOMAS ROTHGEB

VS. TRAVIS COUNTY, TEXAS

THE AMERICAN TOBACCO
COMPANY, PHILIP MORRIS
INCORPORATED, PONCA
WHOLESALE MERCANTILE COMPANY,
H.E. BUTT COMPANY, THE TOBACCO
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COUNCIL FOR TOBACCO
RESEARCH-U.S.A, INC. 261ST JUDICIAL DISTRICT

--*-*

DEPOSITION OF ROBERT ALEX PAGES, Ph.D.

VOLUME I

On the 23rd day of September,
1980 between the hours of 9:40 a.m. and 3:00
p.m. at the offices of BROWN, MARONEY, ROSE,
BARBER & DYE, 1400 One Congress Plaza, 111
Congress Avenue, Austin, Texas before me, SALLY
A. KING, a Certified Shorthand Reporter and
Notary Public in and for the State of Texas,
appeared ROBERT ALEX PAGES, who, being by me
first duly sworn, gave his oral, videotaped
deposition at the instance of the Plaintiffs in
said cause, pursuant to subpoena and the
agreements stated hereinafter.

2017015186

APPEARANCES**For the Plaintiffs:**

BYRD, DAVIS & EISENBERG
By: Mr. Don Davis and
Mr. Mike Davis
707 West 34th Street
Austin, Texas 78705

For Philip Morris, Incorporated:

BROWN, MARONEY, ROSE, BARBER & DYE
By: Mr. Jack D. Maroney and
Mr. Thomas M. Bullion III
1400 One Congress Plaza
111 Congress Avenue
Austin, Texas 78701

and

ARNOLD & PORTER
By: Mr. James E. Scarboro
and Mr. Alfred T. McDonnell
1700 Lincoln Street
Denver, Colorado 80203

and

SHOOK, HARDY & BACON
By: Mr. Gene E. Voigts
One Kansas City Place
1200 Main Street
Kansas City, Missouri 64105

For the American Tobacco Company:

FIGARI & DAVENPORT
By: Mr. Ernest E. Figari, Jr.
and Mr. William J. Albright
4800 First Republic Bank Plaza
901 Main
Dallas, Texas 75202

and

CHADBOURNE & PARKE
By: Mr. Thomas E. Riley
30 Rockefeller Plaza
New York, N.Y. 10112

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and

JCHNSON & SWANSON
By: Ms. Nancy Ebe
100 Congress, Suite 1400
Austin, Texas 78701

For the Tobacco Institute, Incorporated:

MOORE & PETERSON
By: Ms. Lea Courington
2800 First City Center
Dallas, Texas 75201-4621

For the Council for Tobacco
Research-U.S.A., Inc.

BRACEWELL & PATTERSON
By: Mr. W. Stephen Benesh
2900 South Tower Pennzoil Plaza
Houston, Texas 77002

Also present: Keith Weaver, video
technician

I N D E X

Witness:

	Page
Robert Alex Pages, Ph.D.	
Examination by Mr. Davis	8

Exhibits:

Pages Deposition Exhibit No. 1	120
(Philip Morris ad, 4-27-42)	
Pages Deposition Exhibit No. 2	120
(Philip Morris ad, 4-6-42)	
Pages Deposition Exhibit No. 3	124
(Philip Morris ad, 10-11-37)	

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1	Pages Deposition Exhibit No. 4	136
2	(Handwritten document labeled	
	"mice test")	
3	Pages Deposition Exhibit No. 5	140
4	(Toxic agents in the Gas Phase	
	of Cigarette Smoke)	
5	Pages Deposition Exhibit No. 6	164
6	(Toxic agents in the Particulate	
	Matter of Cigarette Smoke)	
7	Pages Deposition Exhibit No. 7	187
8	(Handwritten notes)	
9	Pages Deposition Exhibit No. 8	197
10	(Report on trip to Philip Morris	
	Research Center)	
11		
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2017015189

A G R E E M E N T

It is stipulated and agreed by and between counsel for the respective parties hereto that the deposition of the witness named in the caption hereto may be taken at this time and place, pursuant to Notice and subpoena, and that the said deposition, or any part thereof, when so taken may be used on the trial or any hearing of this case the same as if the witness were present in court and testifying in person.

It is further stipulated and agreed by and between counsel for the respective parties hereto that the necessity for preserving objections to the questions propounded or to the answers given at the time of the taking of the deposition or anytime thereafter, whether orally or in writing, is waived, except objections as to the form of the question or responsiveness of the answer, which objections shall be made during the taking of the deposition, and that any and all other objections to this deposition or any part thereof may be made and urged for the first time at the time same is sought to be offered in evidence on the trial or any hearing

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1 of this cause.

2 It is further stipulated and agreed
3 by and between counsel for the respective
4 parties hereto that the witness may sign said
5 deposition before any duly authorized and acting
6 Notary Public in and for the State of Texas.

7 It is further stipulated and agreed by and
8 between counsel for the respective parties
9 hereto that if the original of the deposition is
10 not signed by the time of trial or any hearing
11 in this cause, then either party may use the
12 original or a copy thereof just as if it were
13 signed and properly filed of record.
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2017015191

1 MR. SCARBORO: Before we begin, or
2 as we begin the deposition, I would like to make
3 a brief statement. I would just like to remind
4 counsel that this deposition is subject to the
5 protective order that exists in the Rothgeb case,
6 and we ask the reporters to label both the
7 deposition transcript, the written transcript
8 and the videotape transcript, in accordance with
9 the protective order. Do you have any
10 objections, Mr. Davis?

11 MR. DAVIS: No objections to that.
12 If we're ready to begin, I'll ask you to--

13 MR. FIGARI: We don't need to go on
14 the video for this, but in the interest of not
15 wasting a lot of time, can we have the same
16 agreement we did in De Noble, whereby if one
17 defense lawyer objects, that's good as to all
18 the defense lawyers so that we don't have to
19 keep repeating it and take a bunch of
20 unnecessary time up?

21 MR. DAVIS: Yes.
22
23
24
25

2017015192

1 ROBERT ALEX PAGES, Ph.D.,
2 the witness hereinbefore named, being first duly
3 cautioned and sworn to testify the truth, the
4 whole truth and nothing but the truth, testified
5 as follows:

6

7

EXAMINATION

8

9

QUESTIONS BY MR. DAVIS:

10

Q. Would you state your name, please?

11

A. My name is Robert Alex Pages.

12

Q. Where do you reside-- where do you

13

live, sir?

14

A. [DELETED]

15

Q. What age man are you?

16

A. Forty-seven, almost.

17

Q. And what is your occupation?

18

A. I'm a chemist.

19

Q. Mr. De Noble, we're here today for

20

the purposes--

21

MR. MARONEY: I believe this is Dr.

22

Pages.

23

BY MR. DAVIS:

24

Q. I'm sorry. Excuse me.

25

(Discussion off the record.)

2012015193

1 BY MR. DAVIS:

2 Q. Did I understand you to say you are
3 a chemist?

4 A. That's right.

5 Q. Dr. Pages, we're here today for the
6 purposes of taking your deposition in a lawsuit
7 that is filed by the Rothgeb family against
8 various cigarette manufacturers. Have you had
9 your deposition taken before?

10 A. No.

11 Q. Have you met with your attorneys and
12 the attorneys that represent Philip Morris so
13 that they can explain to you the purpose and the
14 nature and extent of the deposition?

15 A. Yes.

16 Q. And you understand your testimony
17 here today will be played before a judge and
18 jury just as though you were sitting in court
19 testifying.

20 A. Yes. I do.

21 Q. And you understand that the pains
22 and penalties of perjury apply to this just as
23 though you were in the witness stand under oath.

24 A. I understand that.

25 Q. If for any reason you do not

2012015194

1 understand a question I ask, I want you to feel
2 free to ask me to clarify it or repeat it or you
3 may consult with your attorney. Would you do so?

4 A. Yes, I will.

5 Q. During the course of the deposition,
6 I'm going to be relying on the answers that you
7 give me to my questions. I will ask you, sir,
8 if it becomes apparent to you that I or you have
9 misunderstood a question and given an answer in
10 response to a question you misunderstood, to
11 call that to my attention so that we can go back
12 and pick up the question that you misunderstood
13 so we will have a correct answer. Will you do
14 that, sir?

15 A. Yes, I will.

16 Q. Would you give us, please, your
17 educational background?

18 A. Yes, I have a bachelor of science
19 degree from the Polytechnic Institute of
20 Brooklyn and a Ph.D. in chemistry from the
21 University of Virginia.

22 Q. What year was your doctorate degree
23 obtained?

24 A. 1966.

25 Q. And following the receipt of your

401015195

1 doctorate degree, have you had any other formal
2 education?

3 A. No.

4 Q. Have you attended various seminars
5 for chemists, or training sessions for chemists?

6 A. Yes.

7 Q. Can you give us an idea of what type
8 of additional work you have done?

9 A. I'm not sure I understand that.

10 Q. I mean by work in the realm of
11 seminars or meetings of an educational value to
12 you as a chemist.

13 A. I have attended large numbers of
14 meetings in chemistry, biochemistry, toxicology,
15 various kinds. I even took a course in
16 vertebrate cell culture.

17 Q. Vertebrate cell culture?

18 A. Uh-huh.

19 Q. When was that obtained?

20 A. 1974.

21 Q. Did you receive a diploma or a
22 certificate for that course?

23 A. Yes.

24 Q. Where was the course taken?

25 A. Lake Placid, New York.

2017015196

1 Q. And who sponsored that?

2 A. The W. Alton Jones Cell Science
3 Center.

4 Q. What type of a facility is that?

5 A. It's a research facility, an
6 educational facility devoted to in vitro cell
7 culture techniques.

8 Q. Would you make the distinction for
9 the judge and jury between in vitro and in vivo?

10 A. Yes. In vivo is commonly held to
11 mean experiments conducted in live animals, such
12 as rodents. In vitro are experiments conducted
13 with cells or tissues in test tubes or flasks.

14 Q. Have you had any teaching experience?

15 A. No.

16 Q. Would you tell us what works you
17 have published, whether by way of books or
18 articles?

19 A. I've published six or seven
20 scientific papers.

21 Q. Do you have copies of those in your
22 possession back at your office?

23 A. Yes.

24 Q. Do you have any objection to
25 providing us with copies so we can attach them

2017015197

1 to your deposition?

2 A. No.

3 Q. I will ask you to do so, if you
4 would, please. Your deposition will be sent to
5 you for you to review and correct, and this will
6 serve as reminder to you at this point in your
7 deposition that we have made that request. Okay?

8 A. Certainly.

9 Q. What professional associations or
10 organizations do you hold membership in at the
11 present time?

12 A. The American Chemical Society, the
13 American Association for the Advancement of
14 Science, the Environmental Mutagen Society.

15 THE REPORTER: What?

16 THE WITNESS: The Environmental
17 Mutagen Society, the Tissue Culture Association,
18 Society of Sigma Xi, and the Air Pollution
19 Control Association. That's all that comes to
20 mind at the moment.

21 BY MR. DAVIS:

22 Q. How many of these organisations do
23 you belong to at the request of your employer?

24 A. None.

25 Q. Does your employer pay for your dues

2017015198

1 or fees for any of those organization?

2 A. No.

3 Q. Does your employer have any
4 organizations that the employer belongs to which
5 you serve as their liaison or their member?

6 A. No.

7 Q. What trade or professional journals
8 do you read on a regular basis?

9 A. Oh, a large number.

10 Q. Could you give me a sampling?

11 A. Certainly. Cancer Research, Journal
12 of National Cancer Institute Carcinogenesis,
13 Mutation Research, Environmental Mutagenesis,
14 Proceedings of the National Academy of Sciences.
15 Those are the only ones that come to mind.
16 There are many, many more.

17 Q. All right, sir. Where are you
18 employed at the present time?

19 A. Do you mean where?

20 Q. Yes.

21 A. Physically located?

22 Q. Who employs you? What company do
23 you work for?

24 A. I work for Philip Morris.

25 Q. And is Philip Morris the proper name

2017015199

1 of your employer?

2 A. I guess it's Philip Morris,
3 incorporated.

4 Q. And where is the physical plant
5 located where you work?

6 A. In Richmond, Virginia.

7 Q. How many years have you been
8 employed by Philip Morris?

9 A. It will be 16 years this coming
10 January, so 15 and three quarters.

11 Q. You approximately were 29 years of
12 age when you went to work for Philip Morris?

13 A. No. I think it was more like-- I
14 went to work there in January '73, so I would
15 have been 31.

16 Q. January of '73?

17 A. Uh-huh.

18 Q. Where did you work prior to that
19 employment?

20 A. I had been at the-- as a staff
21 fellow, senior staff fellow at the National
22 Institutes of Health.

23 Q. What type of work did you do there?

24 A. At the National Institutes of Health
25 I was involved in basic research in the area of

2017015200

1 biochemistry related to the thyroid hormones.

2 Q. And would you give the jury, please,
3 just sort of an overview of the type of work you
4 did in the performance of those duties?

5 A. Yes. The projects that I was
6 working on involved studying some of the
7 properties of the proteins in human serum which
8 transport, bind and transport the thyroid
9 hormones. So we were studying properties of
10 these proteins in terms of the binding of
11 thyroid hormones and compounds related to
12 thyroid hormones called thyroid analogues.

13 Q. Did any of your work at the National
14 Institute of Health have anything to do with
15 smoking and health?

16 A. No.

17 Q. Prior to your working for the
18 National Health Institute, National Institute of
19 Health, where did you work?

20 A. Well, between the time I got my
21 Ph.D. degree in 1966 and I started working for
22 the National Institutes of Health in 1968, I
23 served two years on active duty in the United
24 States Army.

25 Q. In what capacity?

2017015201

1 A. I was a captain in the chemical
2 corps.

3 Q. What is the chemical corps of the
4 army?

5 A. Well, I'm not sure they have a
6 chemical corps any longer, but at that time that
7 was the branch of service that was involved or
8 concerned with the possible use, application and
9 defense against chemicals and weapons,
10 biological weapons and riot control agents.

11 Q. In that capacity did you participate
12 in any testing or experiments which had as an
13 objective the development of chemicals to be
14 used in weapons systems?

15 A. No.

16 Q. Tell us how you came to be employed
17 by Philip Morris. Were you recruited? Did you
18 make an application? Just look back in your
19 mind's eye and tell us what you recall about
20 becoming employed as a Philip Morris employee.

21 A. Yes. I had been looking for a
22 permanent employment for a while, and as I
23 recall-- this would have been in 1972, and as I
24 recall at that time, the job market was a little
25 tight. One of the people I had consulted with

2017015202

1 for advice and suggestions was the man under
2 whom I had done my graduate Ph.D. work at the
3 University of Virginia, and that was a man named
4 Dr. Alfred Burger.

5 And Dr. Burger, it so happened, was
6 retained as a consultant by Philip Morris. And
7 apparently he made some inquiries of Philip
8 Morris, and I received a phone call from someone
9 inquiring as to whether or not I might be
10 interested in applying for a job and inviting me
11 for an interview.

12 Q. This would have been before January
13 of '73?

14 A. Yes. I think this was probably in
15 the, say, September, October of 1972.

16 Q. What type of job did they tell you
17 was available?

18 A. A job as an-- well, not an
19 analytical chemist, but it was mainly analytical
20 chemistry directed at separation and
21 identification of components in cigarette smoke
22 condensate.

23 Q. Okay. And when you work in January
24 of '73 for Philip Morris, who was your immediate
25 supervisor?

2017015203

1 A. My immediate supervisor at that time
2 was Mr. William P. Kuhn, K-u-h-n.

3 Q. And what was your first job? What
4 were your first duties?

5 A. Separation-- fractionation,
6 separation of a cigarette smoke condensate.

7 Q. What was the objective of that type
8 of work?

9 A. The objective of that type of work
10 was to characterize cigarette smoke condensates
11 in terms of chemical composition in various
12 fractions to try to see whether or not we could
13 get any information regarding their activity in
14 mouse skin painting bioassays.

15 Q. Why were you interested in finding
16 if you could get any activity in mouse skin
17 painting bioassays?

18 A. At that time Philip Morris was
19 engaged in a large testing program. By that I
20 mean testing various types of cigarette smoke
21 condensate principally because at that same time
22 the United States National Cancer Institute had
23 formed and was operating a group called the
24 tobacco working group, which had as its stated
25 goal the development of a, quote, "less

2017015204

1 hazardous," unquote, cigarette.

2 And the National Cancer Institute
3 tobacco working group was using the results of
4 mouse skin painting bioassays as a basis for
5 making judgments regarding less-- potentially
6 less hazardous cigarettes.

7 Q. Was it part of your task to be able
8 to refute their findings?

9 A. No.

10 Q. Was it part of your task to confirm
11 their findings?

12 A. Understand their findings.

13 Q. You would simply state, it's to
14 understand their findings.

15 A. Yes, and also to learn something
16 about the activity of various cigarette types,
17 experimental cigarette types, which might
18 contain tobacco materials which were of
19 proprietary interest to Philip Morris.

20 Q. So that I can visualize what you are
21 saying, are you telling me that you wanted to
22 take cigarette smoke, find out the specific
23 chemicals that were in cigarette smoke and then
24 by chemical means come up with a solution that
25 you could paint onto mouse skins to determine

2017015205

1 biological activity on that?

2 A. No.

3 Q. Okay. I do not understand the
4 science very well, and if you would explain it
5 so that I can comprehend it, please.

6 A. Basically what we were trying to do
7 was provide some information which hopefully
8 might be used to predict the activity of a
9 cigarette smoke condensate in a mouse skin
10 painting bioassay. As you may understand, it
11 requires on order of a year and a half to two
12 years to conduct a mouse skin bioassay, and
13 that's a long time.

14 And we were looking for information
15 that we might be able to derive by chemical
16 analysis of cigarette smoke condensate to see
17 whether or not we might come up with some
18 compounds or series of compounds whose
19 concentrations or presence in the cigarette
20 smoke condensate might in some way be predictive
21 of mouse skin painting activity.

22 Q. Are you telling me then that you did
23 not do mouse skin painting tests?

24 A. Are you asking if I personally did
25 mouse skin painting tests?

2017015206

1 Q. Yes.

2 A. No, I did not.

3 Q. Did people in your lab or at Philip
4 Morris?

5 A. No.

6 Q. Did anyone that was hired by Philip
7 Morris?

8 A. Yes, they were all done in contract
9 laboratories outside of Philip Morris' own
10 facilities.

11 Q. And what contract laboratories did
12 you use?

13 A. Well, there were several if-- are
14 you restricting this question to this 1973
15 period?

16 Q. Not really, but to start there and
17 then just bring us up to date so that we
18 understand it is fine.

19 A. At that time probably the bulk of
20 our work was being done at a contract laboratory
21 called Bioresearch Consultants in Cambridge,
22 Massachusetts. We subsequently did mouse skin
23 painting work or had it done for us at the
24 American Health Foundation in Valhalla, New York.
25 I think there was another mouse skin painting

2017015207

1 bioassay at International Research and
2 Development Corporation in Kalamazoo, Michigan.

3 And then we also did mouse skin
4 painting studies at a laboratory that we have in
5 West Germany, Inbifo, I-n-b-i-f-o, in Cologne,
6 West Germany. I think that pretty much covers
7 where Philip Morris had mouse skin painting done.

8 Q. Do I understand from your testimony
9 that you were sort of in on the ground floor of
10 this work?

11 A. No, I wouldn't draw that conclusion.

12 Q. This research was ongoing when you
13 were hired then.

14 A. Yes, that's correct.

15 Q. How many years had that been ongoing,
16 if you know?

17 A. I think it's-- my recollection is
18 that the work really began in earnest in--
19 approximately 1969, 1970. So ongoing-- when I
20 say work there, I mean the actual mouse skin
21 painting work. The project in which I was hired,
22 the one that was involved with this chemical
23 analysis, had been formed I believe in the
24 middle of 1972, so it had been ongoing, say, six
25 months to nine months by the time I joined.

2017015208

1 Q. Did you come in as a staff member or
2 did you come in to take charge of this group?

3 A. No, I was a member of the project.

4 Q. Who in addition to yourself
5 comprised that project?

6 A. Oh, all right. There was a Dr. Noel
7 Einolf, E-i-n-o-l-f; Mr. Robert Levins,
8 L-e-v-i-n-s; Mr. Forest Gager, G-a-g-e-r; Mr.
9 Ralph Hellams, H-e-l-l-a-m-s. Well, Mr. William
10 F. Kuhn, as I mentioned earlier. He was the
11 project leader. And I think we had a couple of
12 technicians, Nat McGee, M-c-G-e-e, and one other
13 whose name escapes me at the moment.

14 Then we had two female members of
15 the group, Estelle Truesdale, T-r-u-e-s-d-a-l-e
16 and Ginger-- I don't remember Ginger's last name
17 at the moment. I think that's about every-- no,
18 excuse me. One other, Dr. Ted Katz, K-a-t-z. I
19 think those were the members of the group,
20 including myself, at the time that I joined the
21 project.

22 Q. Tell me now in a physical sense how
23 you actually conducted these experiments, the
24 part that you performed.

25 A. We had members of the group, Mr.

2017015209

1 Hellams and Nat McGee and the other technician,
2 who were charged with the smoking of large
3 numbers of cigarettes to prepare the cigarette
4 smoke condensates.

5 Q. They were your smokers?

6 A. They operated the smoking machines.

7 Q. Oh, okay.

8 A. We had very large 240 port smoking
9 machines. That means they would smoke 240
10 cigarettes simultaneously, and this smoke would
11 be then condensed and processed. And then that
12 was the condensate, the material, the raw
13 material if you like, with which we would begin
14 to do separation.

15 And we used various separation
16 techniques, most at that time based on methods
17 that had been published in the literature. For
18 instance, an initial step might be to take a
19 crude-- a whole cigarette smoke condensate and
20 separate it into its water soluble or insoluble
21 components, as a first step.

22 Another fractionation scheme might
23 involve separations where we took the cigarette
24 smoke condensate and partitioned it between a
25 polar and a nonpolar solvent. And we would

2017015210

1 break down the condensate into progressively
2 smaller and, therefore, chemically more
3 manageable fractions, monitoring the, you know,
4 mass of the fractions, what percentage each
5 fraction comprised of the total starting
6 condensate, and this is how we would go about
7 the initial separation work.

8 Q. As a result of these studies, can
9 you give us a ball-park figure of approximately
10 how many separate chemicals are found in
11 cigarette smoke today?

12 A. As a result of these studies? No, I
13 cannot.

14 Q. As a result of any studies you
15 performed or are aware of.

16 A. Well, as I'm sure you are aware,
17 there have been various estimates given of the
18 total number of chemical species identified in
19 cigarette smoke, cigarette smoke condensate. I
20 think one figure that's appeared in the surgeon
21 general's report is on the order of 4,000.
22 There may be other figures. I mean--

23 Q. Is that a reasonable figure, in your
24 opinion?

25 A. Well, no, I don't know how to

2017015211

1 characterize it as reasonable or unreasonable.
2 Analytical chemistry is such that whether
3 something is present or not is really a function
4 of how sensitive your detection method is. And,
5 you know, maybe 30 years ago it might have been
6 reasonable for 500 or 1,000 compounds.
7 Chemistry has improved tremendously now. We can
8 detect a lot more things. So I don't know if
9 it's reasonable or not. It's a good figure. I
10 mean it's a ball-park figure.

11 MR. FIGARI: Objection.

12 Nonresponsive. Move to strike.

13 BY MR. DAVIS:

14 Q. Based upon the technology available
15 to you today or to chemists today, do you
16 believe the figure of 4,000 separate chemicals
17 is reasonable?

18 A. Yes.

19 Q. Did you ever receive the results of
20 the Bioresearch Consultants' report on skin
21 painting?

22 A. You mean while I was working on the
23 project?

24 Q. Or at any time.

25 A. Yes.

2017015212

1 Q. Generally tell the jury what that
2 study concluded.

3 MR. FIGARI: Objection. Seeks
4 hearsay.

5 THE WITNESS: Well, the studies--
6 there were a number of studies.

7 BY MR. DAVIS:

8 Q. Can you give us an idea of what the
9 findings were of those studies?

10 A. Well, I can give you a general idea.
11 In a particular test there-- there might have
12 been mouse skin painting studies done on, say,
13 nine or 12 different cigarette smoke condensates,
14 that is from different types of experimental
15 cigarettes. And the results would generally be
16 in the form ultimately of comparing the activity
17 of the 12 samples in mouse skin painting.

18 Q. From those results did you learn
19 that there were biological changes that could
20 result from painting mouse skin with these
21 condensates?

22 MR. FIGARI: Objection. Seeks
23 hearsay.

24 THE WITNESS: Yes.

25 BY MR. DAVIS:

2017015213

1 Q. And is that a fact still today, that
2 there are condensates that can be obtained from
3 cigarette smoke, that when applied to mouse skin
4 will result in biological changes on that skin?

5 MR. FIGARI: Objection. No
6 qualification.

7 THE WITNESS: Yes.

8 BY MR. DAVIS:

9 Q. You stated that you also had
10 contract work performed by-- for Philip Morris
11 by the American Health Foundation in Valhalla,
12 New York. Do you recall the name of the
13 director of that facility?

14 A. Yes, I do.

15 Q. What is his name?

16 A. Dr. Ernst Wynder, W-y-n-d-e-r.

17 Q. In your opinion, were the studies
18 that he performed for Philip Morris valid
19 studies?

20 MR. FIGARI: Objection. Speculation
21 and indefinite.

22 MR. SCARBORO: Lacks foundation.

23 BY MR. DAVIS:

24 Q. You may answer.

25 A. Yes.

2017015214

1 Q. In your opinion, are they worthy of
2 consideration by anyone who's looking into the
3 issue of smoking and health?

4 MR. FIGARI: Same objections.

5 MR. SCARBORO: Same objection.

6 THE WITNESS: I'm not sure I
7 understand that question.

8 BY MR. DAVIS:

9 Q. Are those studies in your opinion as
10 a chemist worthy of consideration by an expert
11 who is looking at the issue of smoking and
12 health?

13 MR. FIGARI: Objection. Seeks
14 speculation and is indefinite as to what studies
15 or opinions are being inquired about.

16 MR. SCARBORO: Same objection and
17 the position that I don't have the slight idea
18 what "worthy of consideration" means.

19 BY MR. DAVIS:

20 Q. You may answer.

21 A. I'm a little confused on that.

22 Q. Do you consider the studies valid?

23 MR. SCARBORO: Same objections.

24 THE WITNESS: Yes.

25 BY MR. DAVIS:

2017015215

1 Q. And are they valid to you as a
2 scientist?

3 MR. FIGARI: Same objection..

4 THE WITNESS: Yes.

5 BY MR. DAVIS:

6 Q. Are the results and conclusions
7 reached, in your opinion, reliable?

8 MR. FIGARI: Same objection. No
9 foundation as well.

10 THE WITNESS: My recollection from
11 having read the reports is that the conclusions
12 based-- stated in the report are supported by
13 the data provided in the report.

14 MR. FIGARI: Objection.
15 Nonresponsive. Move to strike.

16 BY MR. DAVIS:

17 Q. Do you consider Dr. Wynder to be an
18 authoritative scientist?

19 MR. FIGARI: Objection. No
20 foundation. Objection. Indefinite as use of
21 the term "authoritative."

22 THE WITNESS: By "authoritative,"
23 what exactly do you mean?

24 BY MR. DAVIS:

25 Q. Someone who in your opinion is

2017015216

1 reliable, someone who is trustworthy, someone
2 who does very professional work, someone who
3 when he reports a finding, you can usually bet
4 that he has data to support his findings.

5 MR. FIGARI: Objection.

6 Multifarious. And objection, no foundation that
7 this witness has the position to make such a
8 statement.

9 THE WITNESS: Much of the work I
10 have seen published by Dr. Wynder, yes, I would
11 agree with your characterization, yes.

12 BY MR. DAVIS:

13 Q. How would you characterize Dr.
14 Wynder's reputation in the scientific community?

15 MR. FIGARI: Objection. No showing
16 he is aware of any such reputation.

17 THE WITNESS: My impression is that
18 Dr. Wynder is held in reasonably high regard.

19 BY MR. DAVIS:

20 Q. I forgot to ask you. Is there a
21 specific person at Bioresearch Consultants that
22 was in charge of the contract work for Philip
23 Morris?

24 A. Well, there were two.

25 Q. Go ahead.

2017015217

1 A. There were two. There was a head of
2 the laboratory, who was Dr. Freddie Homberger,
3 and the person I think who was really in charge
4 of the mouse skin painting program was Dr. Peter
5 Bernfeld.

6 Q. Are those two gentlemen alive, to
7 your knowledge, today?

8 A. I think so.

9 Q. How about at the International-- and
10 I forgot the entire name.

11 A. -- Research and Development
12 Corporation, IRDC.

13 Q. IRDC. Who was in charge of that
14 program?

15 A. I don't remember.

16 Q. Do you recall what the years were
17 that Philip Morris contracted out research at
18 Bioresearch Consultants, over what period of
19 time that span was?

20 A. Yes, I think so. I think the work
21 there probably began on-- somewhere around 1970
22 and I think there was work, skin painting work
23 going on at Bioresearch for us until probably
24 1978, I think, something like that.

25 Q. How about the time frame that the

2017015218

1 American Health Foundation was doing contract
2 work for Philip Morris?

3 A. I believe that began in late 1973 or
4 early 1974, and I think the last study was
5 completed probably 1985.

6 Q. And how about the IRDC work? What
7 time frame was that organization doing work for
8 you?

9 A. In the mouse skin painting area,
10 they were doing work for us 1978 to 1980, I
11 believe.

12 Q. You mentioned earlier that at some
13 point in time you did see the written reports
14 from the Bioresearch Consultants. And I'll ask
15 you, sir, are those reports readily available at
16 the Richmond laboratory?

17 A. I don't understand what you mean by
18 "readily available."

19 Q. Something that you could pick up
20 your phone when you get back to your office and
21 ask your secretary to obtain those for you and
22 have them within a day or two.

23 A. Yes, all I have to do is turn around
24 and reach in a drawer.

25 Q. Okay. How about the American Health

2017015219

1 Foundation studies? Are those in another drawer?

2 A. Same drawer.

3 Q. And how about the IRDC studies?

4 A. Another file cabinet.

5 Q. Okay. I will ask you, sir, that
6 when you get to this point in your deposition,
7 if you would turn around and reach in those
8 drawers and get me copies of the studies from
9 1970 to 1978 from the Bioresearch Consultants.
10 Just the final reports, understand, that you
11 keep in your index, and the American Health
12 Foundation and the IRDC. Do you have any
13 objection to providing those as attachments to
14 your deposition?

15 MR. SCARBORO: Philip Morris may or
16 may not have an objection. We will take your
17 request under advisement.

18 BY MR. DAVIS:

19 Q. I'm going to request that you do so
20 then attach those to your deposition.

21 MR. SCARBORO: Make your request of
22 Philip Morris. Philip Morris will respond.

23 MR. DAVIS: I'm going to make it of
24 the witness.

25 MR. SCARBORO: Well, make it to the

2017015220

1 witness, and Philip Morris will respond, not the
2 witness.

3 MR. DAVIS: That's fine. If Philip
4 Morris has something to hide that the witness
5 doesn't mind turning over--

6 MR. SCARBORO: Philip Morris has
7 nothing to hide, and Philip Morris will respond
8 to your request. You know perfectly well it's a
9 request that's properly addressed not to the
10 witness, but to Philip Morris.

11 MR. DAVIS: We look forward to
12 receiving it.

13 BY MR. DAVIS:

14 Q. How about the work that was done by
15 Inbifo in Europe?

16 A. Inbifo.

17 Q. Inbifo? I'm sorry. Is it
18 I-n-b-e-f-o?

19 A. No, I-n-b-i-f-o.

20 Q. Pronounced E?

21 A. That is in German, yes.

22 Q. And I haven't really asked you about
23 those studies. What type of studies were they
24 doing?

25 A. Well, I believe I invoked the name

2017015221

1 Inbifo in the context of a question you asked as
2 to where we had had mouse skin painting
3 experiments done. So that's exactly the context
4 here. They did some mouse skin painting
5 experiments for us.

6 Q. And in what years did that work span,
7 if you know?

8 A. 1973 to the present day.

9 Q. Those are ongoing at the present
10 time?

11 A. Yes.

12 Q. Does Philip Morris consider mouse
13 skin painting tests to be valid tests?

14 MR. FIGARI: I'm going to object.
15 Seeks the state of mind of a company; therefore,
16 is speculation.

17 MR. SCARBORO: Also object to the
18 question as indefinite and lacks foundation.

19 BY MR. DAVIS:

20 Q. You may answer.

21 A. I think-- if I remember the question,
22 I think you asked me if Philip Morris considered
23 these tests as valid. I'm not sure what you
24 mean by "valid."

25 Q. What do you mean by "valid"?

2017015222

1 MR. SCARBORO: Object. Arguing with
2 the witness. You used the word "valid," then
3 asked him what he means by trying to respond to
4 your question. Let him pick the word and then
5 tell you what it means.

6 BY MR. DAVIS:

7 Q. What do you consider the word "valid"
8 to mean?

9 MR. SCARBORO: Same objection.

10 THE WITNESS: In the context of a
11 scientific experiment, I consider a valid
12 experiment one which is well designed, well
13 conducted and well carried out and yields data
14 which provides a basis for forming the
15 conclusion.

16 BY MR. DAVIS:

17 Q. Using that as a guide, I would take
18 it it would be synonymous with reliable. Valid
19 would be synonymous with reliable in terms of
20 scientific studies?

21 A. I don't want to quibble about
22 semantics, but I suppose so. I would have to
23 carefully look up in the definition in the
24 dictionary to be sure.

25 Q. Do you personally then consider the

2017015223

1 mouse skin painting studies to be valid?

2 MR. FIGARI: Objection. Indefinite.
3 No specification what kind of studies or
4 conditions of those studies so as to make a
5 determination of validity.

6 THE WITNESS: Like any scientific
7 experiments, if they are properly conducted and--
8 well conducted and well designed and yield good
9 data, the results may be, quote, valid, unquote.
10 If they are not well conducted, if something
11 goes wrong, the animals get sick or whatever,
12 then they may be totally invalid or unreliable.

13 BY MR. DAVIS:

14 Q. Do you consider the studies which
15 you have reports of from IRDC to have been valid?

16 MR. SCARBORO: Same objection.

17 MR. FIGARI: Objection. No
18 foundation and indefinite.

19 THE WITNESS: Well, now you are
20 asking me to remember the results of the study.
21 I would have to really look at the report, but
22 the best as I can recall, yes, I think the
23 results were valid.

24 BY MR. DAVIS:

25 Q. Do you consider the American Health

2017015224

1 Foundation studies to have been valid?

2 MR. SCARBORO: Same objections.

3 MR. FIGARI: Same objections.

4 THE WITNESS: Same answer. I would
5 have to really look. My recollection is yes.

6 BY MR. DAVIS:

7 Q. Now, with regard to the Inbifo
8 studies, do you consider those studies that have
9 been reported to you to have been valid?

10 MR. SCARBORO: Same objections.

11 MR. FIGARI: Same objections.

12 THE WITNESS: I don't recall
13 anything going wrong with the experiments that
14 would lead me to question the reliability of the
15 result.

16 BY MR. DAVIS:

17 Q. Do you have copies of the Inbifo
18 studies in your office back in Richmond,
19 Virginia, those that have been finalized to date
20 or reports that have been sent to you to date
21 sort of giving you a continuous briefing on what
22 is going on in the results? Do you have those
23 studies available?

24 A. Yes.

25 Q. Are they readily attainable also?

2017015225

1 A. Well--

2 Q. In the sense that you can turn
3 around and pull them out of a drawer or file
4 cabinet?

5 A. Yes.

6 Q. Do you have any objection to
7 providing us with copies of those?

8 A. I guess not.

9 Q. Okay. I will also ask you at this
10 point in your deposition to turn around or go to
11 that file drawer and get those studies and
12 attach them to your deposition.

13 MR. SCARBORO: We will take the
14 request under advisement, Mr. Davis.

15 BY MR. DAVIS:

16 Q. You stated that those tests are
17 ongoing. Why are those tests ongoing?

18 A. I don't understand. You mean, why
19 are we still doing them?

20 Q. Yes.

21 A. Well, for a number of reasons. One
22 reason is that we're still trying to learn
23 something about mouse skin painting and what
24 kinds of factors enter into the results one gets
25 in a mouse skin painting bioassay. In some

2017015226

1 cases we are doing them, or we have been doing
2 them because the results of a mouse skin
3 painting bioassay may be required or desired by
4 an overseas regulatory body with regard to some
5 constituent of a cigarette. A number of reasons
6 like that.

7 Q. Are there regulatory bodies in
8 Europe that oversee the production or
9 manufacture of cigarettes?

10 MR. SCARBORO: Object. Lacks
11 foundation. You haven't established this
12 witness knows what the foreign regulatory bodies--

13 BY MR. DAVIS:

14 Q. You may answer the question.

15 A. Well, I'm not familiar in detail
16 with the situations in every country in Europe,
17 but certainly one country I do know a little bit
18 about is the United Kingdom, and there there is
19 a body called the Independent Scientific
20 Committee on Smoking and Health. And this body
21 does have an advisory role to the United Kingdom
22 government regarding tobacco products.

23 Q. What type of regulations do they
24 impose upon tobacco products, if you are aware?

25 A. I think the answer is, they don't

2017015227

1 impose any regulations at all. The relationship
2 with-- between the tobacco manufacturers of the
3 United Kingdom and the Independent Scientific
4 Committee is purely on a voluntary basis based
5 on voluntary agreements, not a legislated
6 statute type of agreement.

7 Q. Okay. Is there any type of agency
8 or authority that you are aware of in Europe
9 that in any way restricts or regulates the
10 content of cigarettes manufactured in Europe?

11 A. Could you restate that question,
12 please?

13 Q. Yes, sir. Is there any type of
14 agency or regulatory body that you are aware of
15 in Europe that in any way restricts or regulates
16 the content of cigarettes in Europe, that are
17 manufactured in Europe?

18 A. Yes. I think there are regulations
19 in various countries in Europe which prescribe
20 what can be added to a cigarette by way of an
21 ingredient or composition of paper or whatever,
22 and this varies from country to country.

23 Q. Is there any agency or regulatory
24 body in the United States that regulates the
25 composition of cigarettes manufactured and sold

2017015228

1 in the United States?

2 A. No, I'm not sure. I don't think so.

3 Q. Is it a correct statement that the
4 manufacture of cigarettes in the United States
5 is not regulated by the United States?

6 MR. SCARBORO: Object. Lacks
7 foundation. Asked and answered.

8 MR. FIGARI: Objection. No
9 qualification.

10 BY MR. DAVIS:

11 Q. As far as you know.

12 A. As far as I know, no.

13 Q. Have you attended meetings at
14 various times during your employment with Philip
15 Morris where discussions have been had
16 concerning efforts to regulate the cigarette
17 industry in the United States?

18 A. Efforts to regulate the cigarette
19 industry in the United States?

20 Q. Yes.

21 A. Yes.

22 Q. What type of meetings have you
23 attended?

24 A. I don't understand "what type of
25 meeting."

2017015229

1 Q. Well, you said you have attended
2 meetings since you've been employed by Philip
3 Morris.

4 A. Where that subject has been
5 discussed, yes.

6 Q. And what has been the nature of
7 those discussions?

8 MR. FIGARI: Objection. Indefinite
9 as to time, participants or use of the term
10 "nature."

11 THE WITNESS: I'm sorry. I really
12 forget the question. Could you repeat it,
13 please?

14 BY MR. DAVIS:

15 Q. I want you to tell us if you can,
16 please, what has been the nature of your
17 discussions with people concerning the
18 regulation of the cigarette industry in the
19 United States.

20 MR. FIGARI: Objection. Indefinite.

21 THE WITNESS: Okay. I mean I can't
22 recall every meeting at which this subject may
23 have been discussed, but certainly one area
24 which comes readily to mind would be the
25 recently-- recently being three or four years

2017015230

1 ago-- passed legislation in the U.S. Congress
2 requiring cigarette manufacturers to disclose to
3 the Department of Health and Human Services the
4 nature of the ingredients added to tobacco in
5 the manufacture of cigarettes.

6 MR. FIGARI: Objection. Nonresponsive.
7 Move to strike.

8 BY MR. DAVIS:

9 Q. Okay. Any other type of discussions
10 that you recall?

11 A. Well, from time to time there may
12 have been discussions over possibilities of some
13 day having cigarettes regulated by the Food and
14 Drug Administration.

15 Q. Does your company as a matter of
16 company policy resist efforts to regulate the
17 manufacture or production of cigarettes?

18 MR. SCARBORO: Objection. Lacks
19 foundation.

20 THE WITNESS: I don't know.

21 BY MR. DAVIS:

22 Q. Does your department in any way
23 resist regulation?

24 MR. SCARBORO: Same objection.

25 THE WITNESS: No. Wait a minute.

2017015231

1 Maybe I should ask you what you meant by my
2 department.

3 BY MR. DAVIS:

4 Q. Perhaps I have not been very clear,
5 and I apologize. What department do you work in?

6 A. The name of my department is the
7 department of science and technology.

8 Q. If we were going to have some
9 understanding of where your department falls,
10 how would we chart out where your department is
11 in the overall picture of the company?

12 A. Well, I can try to describe it for
13 you.

14 Q. Would you, please?

15 A. Sure. We work in the area of the
16 company known as the Philip Morris-USA. That's
17 the domestic operating company of Philip Morris,
18 Incorporated. And that company is-- has as its
19 president Mr. Frank Resnik. Under him there is
20 an executive vice president for operations whose
21 name is Mr. Mark Serrano, and under Mr. Serrano
22 reporting to-- among the departments reporting
23 to Mr. Serrano are the department of science and
24 technology.

25 Q. Okay. Where does the research and

2017015232

1 development department fall in that picture?

2 A. The research and development
3 department also reports to Mr. Serrano.

4 Q. But that is a separate department
5 from your department?

6 A. That's correct.

7 Q. Okay. Now, when you first started
8 with Philip Morris, were you in the same
9 department in which you find yourself today?

10 A. No.

11 Q. And what department were you in at
12 that time?

13 A. Research and development department.

14 Q. And from research and development,
15 would you sort of take us through the sequence
16 that led you into the scientific department?

17 A. Yes. I worked in the research and
18 development department until approximately
19 spring, I guess around April, May of 1984. And
20 then the science and technology department was
21 formed, and I joined it.

22 Q. What is the purpose for the science
23 and technology department?

24 A. Well, it has several purposes. One
25 of our responsibilities, for example, would be

2017015233

1 to arrange for outside testing of-- that may be
2 desired by the research and development
3 department. For instance, to set up a contract
4 with an outside laboratory to do a particular
5 piece of work, we would probably handle that.
6 We also represent the company in some outside
7 scientific organizations.

8 We certainly have a responsibility
9 to monitor the smoking and health literature.
10 We also have a responsibility to assist R & D in
11 matters of information principally and
12 interpretation of international tobacco
13 regulations and so on, keeping up with those.

14 So we-- that's probably not the
15 whole thing, but that's the kinds of activities
16 that we're involved in, yes.

17 Q. How large a group do you have in
18 your department?

19 A. Well, there's actually only four of
20 us, including the secretary.

21 Q. And those four people are who?

22 A. The director of science and
23 technology, my boss, is Dr. Thomas S. Osdone,
24 O-s-d-e-n-e, and then there's myself and the
25 secretary, Mrs. Nancy Peters. And the fourth

2017015234

1 person is Ms. Judith Ware, W-a-r-e.

2 Q. And what is Ms. Ware's position?

3 A. I guess she has the title of
4 research scientist.

5 Q. And what does she do in her normal
6 activities?

7 A. She's very skilled and experienced
8 in information retrieval, searching computer
9 data bases and so on to retrieve information.

10 Could we have a little break?

11 Q. Sure. Any time you need to take a
12 break, just ask.

13
14 (RECESS)

15
16 BY MR. DAVIS:

17 Q. We're back on the record now after
18 taking a brief break. We were discussing
19 various reports that you have in your possession
20 from Bioresearch Consultants and the American
21 Health Foundation, IRDC and Inbifo. Did I
22 understand you to say that Inbifo was a Philip
23 Morris laboratory?

24 A. I may have said that.

25 Q. Is that accurate?

2017015235

1 A. Yes.

2 Q. Is it owned by Philip Morris or one
3 of its subsidiaries?

4 A. Yes.

5 Q. Is the testing that you have
6 described that was done by these companies and
7 which is still ongoing within Inbifo, is that
8 known as biological testing?

9 A. That's certainly one phrase that
10 could be used to describe it, yes.

11 Q. Does biological testing describe
12 studies which seek to determine the effect of
13 substance on living tissues or living organisms?

14 A. Yes, it certainly could.

15 Q. Is it possible for you to sit here
16 today and describe to me the methodology of
17 those studies and the findings without having
18 the actual reports in front of you to review?

19 A. No, I don't think so.

20 Q. And in order for anyone to know the
21 methodology and the results, would it be
22 essential that they have the reports to read to
23 make those studies understandable?

24 A. I don't understand that question. I
25 mean you are-- that question carries over a

2017015236

1 large number of experiments over a substantial
2 period of time. It depends what you want to
3 know, or what someone wants to know and how much
4 detail they need whether or not they have to
5 have the report.

6 Q. If I wanted to know the methodology
7 and the results of the studies done at
8 Bioresearch Consultants from 1970 to 1978, would
9 it be necessary that I have the actual reports
10 of those studies?

11 MR. SCARBORO: Object. You are
12 asking the witness to tell you what you need. I
13 don't think the witness--

14 BY MR. DAVIS:

15 Q. What I'm asking, of course, is there
16 any other source for me to get that information
17 without those studies?

18 A. Well, I don't know if there's any
19 other source.

20 Q. As far as you know, would the
21 studies themselves be the best available
22 evidence, to you at least, of the methodology
23 and results of those studies?

24 MR. SCARBORO: Object. Lacks
25 foundation. There may be many other places.

2017015237

1 Answer it you can, Dr. Pages.

2 THE WITNESS: Well, I'm not sure. I
3 mean it's normal in science if you want to look
4 up the results of some work that you have done
5 you go to what records you have of whatever it
6 is you have done.

7 BY MR. DAVIS:

8 Q. If I were to ask you, tell me the
9 results of those studies and the methodologies
10 employed, would you, in fact, go to the studies
11 which you have on hand?

12 A. Depends on what you want to know.

13 Q. Okay. If I want to know the
14 methodology of Bioresearch Consultant studies
15 from 1970 to '78, would I be able to obtain that
16 information from the studies which you have in
17 your file?

18 A. Yes, I think so.

19 Q. And would I be able to obtain the
20 results of the other studies that we have
21 already discussed by going through the studies
22 in your file?

23 A. Yes.

24 Q. Okay. You stated that part of your
25 job is to be aware of overseas regulatory bodies,

2017015238

1 at least that's what you stated part of your
2 department's function was. And it's called the
3 what again? It's slipped my mind, your
4 department's title, science and--

5 A. Science and technology.

6 Q. Science and technology, or science
7 technology?

8 A. Science and technology.

9 Q. Did I understand you correctly that
10 part of the duties and responsibilities for
11 Philip Morris of the department of science and
12 technology is to be aware of the overseas
13 regulatory bodies?

14 A. Yes.

15 Q. Do you serve in any function in your
16 department in that regard, or do you have any
17 responsibility in that regard?

18 A. I don't understand that question.

19 Q. Do you have any responsibility in
20 becoming aware or in reporting overseas
21 regulatory bodies to your department or to
22 anyone in your company?

23 A. Yes.

24 Q. What responsibility do you have?

25 A. Well, for instance, if someone in

2017015239

1 R & D were to ask me about regulations in a
2 particular country regarding this, that or so on,
3 we would undertake to try to find out. And if
4 we didn't have the information, we would try to
5 get it and then relay that information back to
6 whoever asked for it.

7 Q. Okay. A moment ago I asked you why
8 you were continuing to do skin painting studies
9 at Inbifo. I failed to ask you why you were not
10 continuing to do studies on skin painting with
11 the American Health Foundation. Do you know why
12 your company is no longer contracting with that
13 firm to do skin painting studies?

14 A. No.

15 Q. Do you know why you are no longer
16 contracting with IRDC to do skin painting
17 studies?

18 A. There's no special reason that comes
19 to mind.

20 Q. Is there any reason that you know of
21 why only a company laboratory is now performing
22 skin painting studies for Philip Morris?

23 A. Well, it's certainly more convenient.

24 Q. Do you publish the results of those
25 studies?

2017015240

1 A. Sometimes.

2 Q. Where do you publish them?

3 A. Well, we've sought to publish one
4 study in a European journal.

5 Q. What was the name of that study?

6 A. It was the study designed to
7 evaluate the effect of a cigarette ingredient.

8 Q. Do you know which ingredient?

9 A. Yes.

10 Q. What was it?

11 MR. SCARBORO: Let me just pause for
12 a moment here and consult with the witness
13 because he may be about to divulge a piece of
14 information that Philip Morris considers
15 proprietary. If so, I do not object to your
16 asking the question, but I may ask other counsel
17 in the room who represent other tobacco
18 companies to excuse themselves while we pursue
19 this line of questioning. May I consult with
20 the witness?

21 MR. DAVIS: Certainly.

22 (Discussion off the record.)

23 MR. SCARBORO: Just a second.

24 MR. DAVIS: May we continue now?

25 MR. SCARBORO: Yes, Mr. Davis, I

2017015241

1 just wanted to consult with the witness because
2 of the possibility that the information might be
3 proprietary in nature, but we have no objection
4 to your continuing.

5 BY MR. DAVIS:

6 Q. Go ahead, if you would. The
7 question I believe that is put to you is, what
8 was that substance?

9 A. That substance is cocoa.

10 Q. And what type of study was reported?

11 A. A mouse skin painting.

12 Q. What were the results of that study?

13 A. They showed that the presence of
14 cocoa in a cigarette had no effect on the
15 biological activity of the cigarette smoke
16 condensate derived from that cigarette in
17 comparison to a reference cigarette with no
18 cocoa in the mouse skin painting activity.

19 Q. Has your laboratory at Inbifo
20 discovered chemicals that are in cigarette smoke
21 that do have a biological activity when used in
22 mouse skin painting?

23 A. I don't understand that question.

24 Q. Well, you told me cocoa has no
25 biological effects; is that correct?

2017015242

1 A. In the mouse skin painting bioassay,
2 that's correct, yes.

3 Q. Has your laboratory discovered any
4 substance that is in cigarettes that does have a
5 biological effect on mouse skin painting?

6 A. I don't know how to answer that
7 question. I think the answer is, no, it hasn't
8 in the sense of discovering anything.

9 Q. Had you verified something that
10 somebody else discovered?

11 A. In some cases, yes.

12 Q. Okay. Now tell the jury. What
13 substances have you found that do have a
14 biological effect on mouse skin painting?

15 A. Well, before one runs a mouse skin
16 painting bioassay, one uses what is known as a
17 positive control. And so we normally use a
18 positive control. That may be a compound like
19 dimethylbenzanthracene and applied to mouse skin
20 in a particular dose.

21 Q. Okay. My question was, what have
22 you found in cigarettes that produce a positive
23 biological effect?

24 A. Again, I don't understand your
25 question.

2017015243

1 Q. What compounds, chemicals or
2 substances of any type have you found that will
3 produce a biological effect on mouse skin when
4 painted on that skin and when taken from
5 cigarettes?

6 A. None.

7 Q. There is nothing in cigarette smoke
8 or in cigarettes that you have found that has
9 any effects whatsoever on mouse skin?

10 A. That's not the question you asked me.

11 Q. Okay. Now I'm asking you the
12 question, what have you found that is in
13 cigarettes or cigarette smoke that has a
14 biological effect?

15 A. Same answer: none. We've been
16 testing cigarette smoke condensate, not
17 compounds from cigarette smoke condensate.

18 Q. Okay. Then what have you found in
19 cigarette smoke condensate that has any effect
20 on mouse skin painting?

21 A. I don't understand that question.
22 The cigarette smoke condensate may or may not
23 have an effect on mouse skin bioassay.

24 Q. Okay. What have you found in that
25 condensate that does have an effect?

2017015244

1 A. We have not looked for things
2 specifically in the condensate.

3 Q. Why are you doing the tests?

4 A. Why are we doing the tests?

5 Q. Yes.

6 A. I think I answered that question--
7 you asked that question, and I answered that
8 earlier. For instance, this cocoa test was done
9 for the purposes of having cocoa approved for
10 use in the United Kingdom as a cigarette
11 ingredient. That's one example of a quasi-
12 regulatory body which requested this test as a
13 basis for making a judgment whether or not cocoa
14 would be allowed for use in the United Kingdom.

15 Q. Okay. You are going to have to
16 excuse my inability to understand the scientific
17 methodology of these tests, so I'm going to have
18 to take this step by step. You stated that the
19 mouse skin painting tests at your laboratory in
20 Inbifo are testing smoke constituents; is that
21 correct?

22 A. No, that's not correct.

23 Q. What is it?

24 A. Smoke condensate, whole smoke
25 condensate.

2017015245

1 Q. Whole smoke condensate. What is
2 whole smoke condensate?

3 A. Whole smoke condensate is a product
4 prepared by taking the smoke from cigarettes and
5 then collecting it in a-- usually at dry ice
6 temperatures-- in a container cooled at dry ice
7 temperatures and condensing the smoke. Hence,
8 the name "condensate."

9 Q. Then what do you do with the smoke
10 that is condensed?

11 A. Then you to remove the-- you have to
12 what we call process the condensate. That means
13 you have to remove it from this flask using a
14 solvent acetone. You have to then evaporate the
15 solvent off under reduced pressure trying to
16 keep the temperature less than 40 degrees
17 Centigrade.

18 You also have to continue processing
19 the condensate to reduce the amount of moisture,
20 water in the condensate down to a particular
21 level because water has been shown to have an
22 effect in mouse skin painting activity in
23 mixture with condensate. And then you dissolve
24 the condensate in acetone, and now it's ready to
25 be applied.

2017015246

1 Q. Is the substance which you end up
2 with that has been applied, has that ever
3 produced any biological activity in these mouse
4 skin painting tests?

5 A. Some have; some have not.

6 Q. Which have?

7 A. Which have?

8 Q. Yes. You said some have; some have
9 not.

10 A. Yes, we have tested a large number
11 of different-- of smoke condensates from
12 different types of cigarettes, and some have
13 produced some activity, and some have produced
14 lesser amounts of activity.

15 Q. Do all of them produce some amount
16 of activity?

17 A. Not necessarily.

18 Q. Do the majority of them produce some
19 amount of biological activity?

20 A. Based on the ones we have tested?

21 Q. Yes.

22 A. Rephrase the question, please.

23 Q. Do the majority of the smoke
24 condensates you have tested produce a biological
25 activity?

2017015247

1 A. In the mouse skin test?

2 Q. That's what we're talking about.

3 A. Yes, I would say that's a fair
4 statement.

5 Q. So is it a correct statement that
6 the smoke condensate of cigarettes as a generic
7 term would in all probability produce biological
8 activity when painted on mouse skin?

9 A. Depends on the mouse. Depends how
10 the test is conducted.

11 Q. Okay. Tell us the differences in
12 the mice and the differences in the way the
13 tests are conducted that produce the different
14 results.

15 A. Is that a question?

16 Q. Yes.

17 A. I didn't understand it.

18 Q. You said that not all generic
19 cigarettes, in all reasonable probability, would
20 produce biological changes if you took whole
21 smoke condensates from cigarettes and painted
22 them on a mouse, at least that's what I was
23 trying to find out, and you said it depends on
24 the mouse. Now, is there a difference in the
25 mice that some mice react differently to smoke

2017015248

1 condensates.

2 Q. Yes, indeed. Absolutely.

3 Q. Okay. Would you explain how this
4 difference--

5 A. Well, there are various types of
6 strains of mice which are genetically different.
7 There are mouse strains which are insensitive to
8 producing response when painted on their backs,
9 shaved back of the mice, with whole smoke
10 condensate. You won't get any activity.

11 Other strains are bred specifically
12 to be sensitive to this, and, yes, you will get
13 some effects. So it depends on the type of
14 mouse.

15 Q. Have you shared the results of these
16 studies at the Inbifo laboratory with other
17 cigarette manufacturers?

18 MR. SCARBORO: Object. Lacks
19 foundation.

20 THE WITNESS: I don't think so.

21 BY MR. DAVIS:

22 Q. Have you furnished the results of
23 these tests to the department of smoking and
24 health, the office of smoking and health of the
25 United States government?

2017015249

1 MR. SCARBORO: Same objection.

2 THE WITNESS: No.

3 BY MR. DAVIS:

4 Q. Have you shared them with the
5 attorney general of the United States?

6 MR. SCARBORO: Same objection.

7 THE WITNESS: I don't understand why
8 we would want to.

9 BY MR. DAVIS:

10 Q. Have you shared them with the
11 surgeon general of the United States?

12 MR. SCARBORO: Same objection.

13 THE WITNESS: Same answer.

14 BY MR. DAVIS:

15 Q. No?

16 A. No.

17 Q. Why not?

18 A. There's no reason to.

19 Q. Okay. Do you think that the surgeon
20 general of the United States would be interested
21 in learning the biological activities that are
22 produced by whole smoke condensate--

23 MR. SCARBORO: Objection. Calls
24 for--

25 BY MR. DAVIS:

2017015250

1 Q. -- when painted on a mouse's skin?

2 MR. SCARBORO: Objection. Calls for
3 the witness to speculate about the state of the
4 mind of the surgeon general, which would be a
5 difficult thing for anyone to do. It lacks
6 foundation.

7 BY MR. DAVIS:

8 Q. You may answer.

9 A. The answer is no. He already knows
10 about it.

11 Q. He does know about it?

12 A. Absolutely.

13 Q. Where did he to your-- if you know
14 that he knows about it, tell us where you think
15 he learned about it.

16 A. From published studies in the
17 literature on mouse skin painting activity.
18 That was your question.

19 Q. Perhaps I misled you. I was trying
20 to find out if you had provided the results of
21 the Inbifo laboratory studies to the surgeon
22 general, and it was my understanding that you
23 said no, Philip Morris had not done so; is that
24 correct?

25 MR. MARONEY: Asked and answered.

2017015251

1 BY MR. DAVIS:

2 Q. That's correct?

3 A. That's correct.

4 Q. So what you are telling me is, the
5 surgeon general in all probability knows the
6 results of your tests simply because of other
7 studies that have been done publicly and
8 published. Is that accurate? Am I
9 understanding what you are saying?

10 A. You have me a little bit confused
11 now. I interpreted your question to be
12 regarding does the surgeon general know about
13 the results of mouse skin painting tests. Yes,
14 he does. Particular tests that we have
15 conducted? No, he may not. Some of these tests
16 have been involved with proprietary materials.
17 There's no reason why he should know about those.

18 Q. Have you had more biological
19 activity when you identify whole smoke
20 condensate with proprietary material as opposed
21 to things that are naturally in cigarettes?

22 A. No.

23 Q. So the biological activity that you
24 have experienced or found is something that is
25 in all probability the result of whole smoke

2017015252

1 condensate in products natural to cigarettes as
2 opposed to something your company may add.

3 MR. SCARBORO: Object. Lacks
4 foundation.

5 BY MR. DAVIS:

6 Q. Is that correct?

7 MR. SCARBORO: It's unclear.

8 THE WITNESS: That's correct.

9 MR. DAVIS: If we can take just a
10 two-second break, please.

11 (Discussion off the record.)

12 MR. DAVIS: Back on camera.

13 BY MR. DAVIS:

14 Q. Have you ever had been asked to
15 serve as a consultant outside of your company?

16 A. I don't quite understand what you
17 mean by that.

18 Q. Do you serve as an independent
19 consultant outside of your employment with
20 Philip Morris?

21 A. No.

22 Q. Have you ever been asked by an
23 association or an organization to perform any
24 tests or studies by way of consulting with them
25 on projects?

2017015253

1 A. No.

2 Q. I want to go back now to your
3 laboratory, Inbifo. You stated that you have
4 ongoing whole smoke constituent biological
5 research going on there. If you have found that
6 there are whole smoke constituents that produce
7 biological activity, has that resulted in any
8 action being taken by your company in the
9 manufacturing processes of your cigarette
10 products?

11 MR. FIGARI: Objection. No
12 foundation.

13 THE WITNESS: I'm not sure I
14 understand your question. You referred to whole
15 smoke constituent. That's not correct.

16 BY MR. DAVIS:

17 Q. I'm sorry.

18 A. What I said was whole smoke
19 condensate. Now, what was the substance of your
20 question?

21 Q. I understood from what you said that
22 your company has found that whole smoke —
23 condensate when it's taken through the process
24 you have described for the jury does, in fact,
25 produce biological changes when painted on the

2017015254

1 backs of certain strains of mice; is that
2 correct?

3 A. Uh-huh, yes, that's correct.

4 Q. What action has your company taken
5 with regard to the manufacture or design of
6 cigarettes as a result of that information?

7 MR. FIGARI: Objection. No
8 foundation.

9 THE WITNESS: You are asking me if
10 based on mouse skin painting activity testing my
11 company has ever taken any action?

12 BY MR. DAVIS:

13 Q. Yes.

14 A. Testing done at Inbifo?

15 Q. Yes.

16 A. Not that I'm aware of.

17 Q. I guess I'm sort of at a loss as to
18 why you are continuing the studies. Is there a
19 certain level of biological activity that will
20 result in some action on the part of your
21 company in the manufacture of your cigarettes?

22 MR. SCARBORO: Object. The witness
23 has already asked-- explained at least twice why
24 the studies are conducted. If the question is,
25 is there some reason, you haven't established

2017015255

1 the foundation for that question in this
2 witness' knowledge.

3 MR. FIGARI: Objection. Speculation.

4 BY MR. DAVIS:

5 Q. Let me ask it this way to make sure
6 I have it in my mind then. It is not the
7 purpose of any of these studies at Inbifo to in
8 any way change the design or the manufacturing
9 process of your company's product; is that
10 correct?

11 MR. SCARBORO: Same objection.

12 Asked and answered.

13 MR. FIGARI: Same objection.

14 BY MR. DAVIS:

15 Q. Is that correct, sir?

16 A. I think I have already answered--
17 given you some examples of why we're doing these
18 testings. Certainly if-- a test result at
19 Inbifo could result in some action on the part
20 of the company. You didn't ask me that
21 originally. You asked me whether or not they
22 had, and I said no, it had not. That doesn't
23 preclude that it couldn't.

24 Q. Okay. So if at some point in the
25 future your company decides that a test result

2017015256

1 warrants action, to your mind your company would
2 take action.

3 MR. SCARBORO: Object. Calls for
4 speculation and guesswork.

5 THE WITNESS: It might or it might
6 not. It depends on the circumstances.

7 BY MR. DAVIS:

8 Q. Okay. You keep referring in your
9 tests to tests for specific proprietary
10 constituents. If I understand what you are
11 saying, you are saying you are doing that to
12 make certain that you can comply with European
13 regulatory bodies. Did I understand that
14 correctly?

15 A. No, I think you are totally
16 mischaracterizing what I said. I think I told
17 you that as an example of a type-- a reason we
18 were doing mouse skin painting, I may have given
19 you an example where we conducted a test on an
20 ingredient, cocoa, specifically to meet a
21 requirement, arrived at it in discussion with
22 the Independent Scientific Committee on Smoking
23 and Health of the United Kingdom. So, yes, to
24 that extent, that's an example of why we do some
25 kinds of mouse skin painting.

2017015257

1 Q. Have you tested other specific
2 constituents besides cocoa?

3 A. Yes.

4 Q. Which?

5 MR. SCARBORO: Let me consult with
6 the witness for a moment, please.

7 MR. DAVIS: Okay.

8 (Discussion off the record.)

9 BY MR. DAVIS:

10 Q. You stated earlier that you had
11 turned over the results of cocoa tests to a
12 regulatory-- or to a group that showed no
13 biological activity. I want to ask you: Have
14 you ever released the results of studies from
15 Inbifo that showed biological activity from
16 whole smoke condensate?

17 MR. SCARBORO: Object. Assumes
18 facts not in evidence and lacks foundation.

19 THE WITNESS: No.

20 BY MR. DAVIS:

21 Q. But you have found biological
22 activity from whole smoke condensate tests done
23 at Inbifo, have you not?

24 A. Yes.

25 Q. Why haven't those results been

2017015258

1 released?

2 MR. SCARBORO: Objection. Asked and
3 answered.

4 THE WITNESS: Again, the example I
5 gave you before referred to a specific test of a
6 specific ingredient. That was the test variable
7 with or without this ingredient. We have done
8 other tests with or without other ingredients,
9 and those tests have shown no difference in
10 activity. And no, we haven't released those
11 because there hasn't been any reason to release
12 them.

13 BY MR. DAVIS:

14 Q. Have you tested chocolate?

15 A. No.

16 Q. Have you tested licorice?

17 A. No.

18 Q. Have you tested sugar syrups?

19 A. Well, let's make sure we understand
20 what we mean here. To evaluate the effect of an
21 ingredient, what you need are two cigarettes:
22 one with the ingredient, and one without the
23 ingredient. Have we conducted such a test where
24 the test cigarette contained sugar syrups and
25 the reference cigarette did not? The answer is

2017015259

1 no, we have not.

2 Q. Do you add chocolate to your tobacco
3 products? Can you answer that for me?

4 MR. SCARBORO: He may be able to,
5 but I don't want him to for a moment here. And
6 I ask to go off the record for a moment, and we
7 can try to get organized about this and get your
8 list of planned questions so we can work out a
9 system for accommodating you. You are entitled
10 to the information, and I'm not denying it. The
11 only interest we have is preserving, to the
12 extent we can and if it's within the rules of
13 proprietary nature, some of the information.
14 And if we could work this out somehow in advance
15 so we don't have to keep interrupting your
16 deposition. Let's go off the record.

17 MR. DAVIS: Sure.

18 (Discussion off the record.)

19 MR. SCARBORO: Back on the record.

20 BY MR. DAVIS:

21 Q. Dr. Pages, I want to ask you about
22 different substances in whole smoke condensate
23 that you may or may not have tested, either
24 independently yourself or through one of your
25 laboratories owned by Philip Morris or through a

2017015260

1 contract laboratory. I want to just ask you a
2 list of ingredients and ask if you have tested
3 these, or Philip Morris has tested them to your
4 knowledge for biological activity. The first is
5 chocolate.

6 A. Not to my knowledge.

7 Q. You mentioned cocoa. How about
8 licorice?

9 A. Let me back up a minute. The
10 overall question that you asked was tested for
11 biological activity. What does that mean? I
12 don't understand that.

13 Q. What do you understand biological
14 activity to mean?

15 A. It's defined by the test system that
16 one uses.

17 Q. Okay. What type of biological
18 activity has been found at your Inbifo lab when
19 skin painting has been done with whole smoke
20 condensate?

21 A. That's exactly the reason I was
22 confused. You see, mouse skin painting activity
23 itself is biological activity. So if you are
24 using biological activity as synonymous with
25 activity in the mouse skin bioassay, then I

2017015261

1 understand your question.

2 Q. Apparently you are making more of it
3 than I am. What I'm trying to find out, did you
4 have any type of a reaction or any type of
5 inflammation or any type of biological activity
6 on the tissue itself as a result of the skin
7 painting?

8 A. Okay. I understand your question
9 now.

10 Q. Okay.

11 A. Now, with respect to--

12 Q. Now, my first question is, have you
13 found biological activity? Has it been observed
14 in the Inbifo laboratory as a result of these
15 skin painting tests?

16 A. Depends on what is being tested.
17 The answer is yes, depending on what is being
18 tested.

19 Q. Okay. What type of biological
20 activity have you observed?

21 A. We've observed inflammations. We
22 have observed tumors on the back of mice.

23 Q. And do those tumors include cancers?

24 A. Yes. Usually they are benign tumors,
25 but there are some carcinomas, yes.

2017015262

1 Q. Okay. Now, have you tested
2 chocolate to determine if it has any biological
3 activity?

4 MR. FIGARI: I'm going to object
5 unless counsel is more specific about who he's
6 referring to is doing the testing. If you are
7 asking--

8 MR. DAVIS: Philip Morris.

9 MR. FIGARI: Well, then I'm going to
10 object to the question on the grounds that it
11 seeks to elicit hearsay and you have not
12 established the personal knowledge of this
13 witness to speculate.

14 THE WITNESS: No.

15 BY MR. DAVIS:

16 Q. You have not tested chocolate?

17 A. Not to my knowledge, no.

18 Q. Have you tested licorice?

19 MR. FIGARI: Same objection.

20 MR. DAVIS: We'll give you a running
21 objection.

22 MR. FIGARI: All right. May I have
23 a running objection, Mr. Davis, that the witness
24 has no personal knowledge, that you have not
25 established a foundation of personal knowledge

2017015263

1 and that you are seeking to elicit hearsay? I'm
2 not asking you to agree to my objection, but
3 simply that they will be a running set of
4 objections.

5 BY MR. DAVIS:

6 Q. Do you have personal knowledge of
7 the results of these tests as to whether or not
8 you have run them on specific ingredients?

9 MR. FIGARI: I'm going to object
10 because you are asking the witness a legal
11 question, namely whether he has personal
12 knowledge. I think the witness has already
13 testified that his knowledge has come from
14 reading reports. If that's the case, that's not
15 personal knowledge.

16 MR. DAVIS: It is personal knowledge
17 in my opinion.

18 MR. FIGARI: It may be, but it's a
19 regurgitation of hearsay in my opinion.

20 BY MR. DAVIS:

21 Q. Do you know whether or not your
22 company has tested these substances?

23 MR. FIGARI: Same objection.

24 THE WITNESS: I think so.

25 BY MR. DAVIS:

2017015264

1 Q. All right. Let's pick up with sugar
2 syrups. Have you tested those?

3 MR. FIGARI: Are you giving me a
4 running objection?

5 MR. DAVIS: (Nods affirmatively.)

6 MR. FIGARI: Is that a yes on the
7 record?

8 MR. DAVIS: Yes.

9 THE WITNESS: No.

10 BY MR. DAVIS:

11 Q. Have you tested maple sugar?

12 A. No, not that I can recall.

13 Q. Propylene glycol?

14 A. No.

15 Q. Glycerol?

16 A. No.

17 Q. Tonka bean extract?

18 A. No.

19 Q. Coumerin?

20 A. No.

21 Q. Rum?

22 A. No.

23 Q. Denatured ethyl alcohol?

24 A. No.

25 Q. Vanillin, vanillin?

2017015265

- 1 A. Vanillin.
- 2 Q. Vanillin?
- 3 A. No.
- 4 Q. Sodium carbonate?
- 5 A. No.
- 6 Q. Flack fiber?
- 7 A. Flax fiber?
- 8 Q. Yes.
- 9 A. No.
- 10 Q. Calcium carbonate?
- 11 A. No.
- 12 Q. Monoammonium phosphate?
- 13 A. No.
- 14 Q. Sodium citrate?
- 15 A. Citrate.
- 16 Q. Citrate.
- 17 A. No.
- 18 Q. Potassium citrate?
- 19 A. No.
- 20 Q. Have you tested a constituent we
- 21 will simply nominate as beta, with the
- 22 understanding that that is a proprietary
- 23 ingredient in a Philip Morris brand of
- 24 cigarettes?
- 25 A. Yes.

2017015266

1 Q. Did that result in biological
2 activity?

3 A. No.

4 Q. You seem to hesitate.

5 A. Well, the results are not completely
6 in yet, but from the results I have seen, the
7 answer is no.

8 Q. Do you have knowledge of the
9 ingredients and additives in Marlboro cigarettes?

10 A. No, I do not.

11 Q. Who in your company has that
12 information?

13 MR. MARONEY: If you know.

14 THE WITNESS: Mr. Elmore Cook,
15 C-o-o-k.

16 BY MR. DAVIS:

17 Q. And where is his office? Is it in
18 Richmond?

19 A. Yes.

20 Q. Is he in your building where you are
21 located?

22 A. Yes, he's in the building in which
23 I'm located, yes.

24 Q. Would he have the ability to provide
25 us with the actual ingredients that are placed

2017015267

1 in Marlboro cigarettes, the additives and
2 ingredients?

3 MR. SCARBORO: Object. Lacks
4 foundation.

5 THE WITNESS: That's my
6 understanding.

7 BY MR. DAVIS:

8 Q. Is there a recipe, if you will, to
9 the ingredients? And by that I mean is there a
10 quantity of a given ingredient that makes up a
11 specific cigarette?

12 A. That's my understanding, but I don't
13 know of my own knowledge.

14 Q. Do you know if the recipe for a
15 given cigarette is a proprietary matter or not?

16 A. Yes, I do.

17 Q. Outside of the recipe, do you know
18 if the ingredients not quantified by recipe are
19 common knowledge in the industry, except for
20 your proprietary beta?

21 A. Do I know that? Yes, I know that.

22 Q. And what is the answer?

23 A. The answer is that that is
24 proprietary information.

25 Q. What the ingredients are?

2017015268

1 A. Yes.

2 Q. Without regard to the recipe?

3 A. Yes. That, I should add, is so
4 recognized in the legislation with which we
5 comply by disclosure to the United States
6 government.

7 Q. Okay. You mentioned that you have
8 ongoing tests for Beta, and you have tested in
9 the past cocoa. What other substances have you
10 tested?

11 MR. SCARBORO: I'm just going to
12 object to the narrative part of that question.
13 Misstates the witness' testimony, I think.
14 BY MR. DAVIS:

15 Q. I thought you had stated that you
16 did studies on cocoa. Was that correct?

17 A. Yes, I stated that.

18 Q. Okay. And you have ongoing tests on
19 Beta at the present time.

20 A. Correct.

21 Q. In addition, what other substances
22 have you tested?

23 MR. FIGARI: Is my running objection
24 continuing, Mr. Davis? Is that a yes?

25 MR. DAVIS: Yes.

2017015269

1 THE WITNESS: I don't understand
2 your use of the term "substance." Is substance
3 meant to include materials such as cocoa?

4 BY MR. DAVIS:

5 Q. Yes.

6 A. The term we prefer to use, I prefer
7 to use is "ingredient."

8 Q. Ingredient. What other ingredient
9 have you tested?

10 MR. SCARBORO: Before the witness
11 answers this question, I need to caution him
12 that we need to stay away from proprietary
13 information, if the answer to that question
14 would require your divulging it. If it does not,
15 I prefer to go on with the deposition so that we
16 don't have to interrupt it.

17 BY MR. DAVIS:

18 Q. Let me come at it this way, if I
19 might. Have you tested other proprietary
20 ingredients in Philip Morris cigarettes?

21 A. I think so.

22 Q. And have those tests been formalized
23 in a report?

24 A. Yes.

25 Q. And are those tests reports

2017015270

1 available to you?

2 A. Yes.

3 Q. And have you also-- have those
4 reports in such a place that with reasonable
5 diligence you could obtain a copy and deliver
6 them to your counsel so that I can request
7 copies from him?

8 A. Yes.

9 Q. And by so doing we do not divulge to
10 anyone what is actually the ingredient that was
11 tested, okay?

12 A. If my counsel agrees, certainly.

13 MR. DAVIS: I would like to request
14 that we be provided with copies of any tests
15 done on the ingredients so we can see both what
16 the ingredients were and what the test results
17 were, okay? I would also like to request that
18 we be provided with a copy or a list of
19 ingredients for Marlboro cigarettes.

20 BY MR. DAVIS:

21 Q. Do you make a distinction--

22 MR. SCARBORO: Let me just say for
23 the record that we will take the request under
24 advisement.

25 BY MR. DAVIS:

2017015271

1 Q. Do you make a distinction between
2 ingredient and additive?

3 A. No. The terminology in the
4 legislation I referred to requires disclosure of
5 ingredients added to tobacco in the manufacture
6 of cigarettes. That's the exact terminology.
7 So some people commonly refer to that as
8 additive, but the appropriate term, the accurate
9 term, is ingredient.

10 Q. Okay. Is there, in addition to
11 ingredients then, the natural constituents of
12 tobacco can be found in tobacco?

13 A. I don't-- again, you are asking me,
14 are there natural materials present in tobacco?

15 Q. Yes.

16 A. Yes.

17 Q. And do you call that constituents of
18 tobacco? What do you call that?

19 A. Those are what is in the tobacco.
20 That's just part of tobacco.

21 Q. Okay. Have you done any whole smoke
22 condensate studies which have tried to eliminate
23 part of those naturally appearing constituents
24 of tobacco to test that for biological activity?

25 A. Let me make sure I understand this

2017015272

1 question before I try to answer it. You are
2 asking me if we have ever conducted-- this is a
3 question back to you to make sure I understand
4 what you--

5 Q. Yes, sir.

6 A. -- what you are trying too find out.
7 You are asking me if we have ever conducted a
8 mouse skin bioassay on a set of cigarettes or
9 two cigarettes, one of which has had some, for
10 the want of a better term, naturally occurring
11 tobacco material removed from it.

12 Q. Yes, sir.

13 A. That was your question?

14 Q. Yes, sir.

15 A. The answer is yes, we have.

16 Q. And which of those naturally
17 occurring constituents have you removed for the
18 purpose of testing?

19 A. Nitrate.

20 Q. Any other?

21 A. Not that I can recall right now.

22 Q. Do you recall the result of the
23 nitrate test?

24 A. Yes.

25 Q. What was that result?

2017015273

1 A. Removal of nitrate resulted in
2 increased mouse skin painting activity.

3 Q. The natural tobacco with the nitrate
4 removed increased the biological activity?

5 A. Removal of the nitrate increased the
6 mouse skin bioassay activity, yes.

7 Q. Dr. Pages, do you consider yourself
8 an expert in any particular field?

9 A. No, I-- that term "expert" just
10 turns me off. I don't like that term, and
11 that's not one I like to use, especially with
12 respect to myself. So, yes, I have some
13 knowledge of certain areas. I don't like to
14 toot my own horn to say I'm an expert on this,
15 that and the other.

16 Q. Okay. Let's go back now to after
17 you became employed with Philip Morris when you
18 were in the research and development laboratory.
19 I would like you to give me an idea of the type
20 of projects that you participated in. And let
21 me ask you: Am I correct that at Philip Morris
22 projects are nominated with a charge number?

23 A. Well, I don't what you mean by
24 nominated projects.

25 Q. Identified.

2017015274

1 A. Yes.

2 Q. Okay. The documents that have been
3 produced have a charge number--

4 A. Yes.

5 Q. -- at the top of the page. Is there
6 any significance to that other than just that's
7 the identification for the project?

8 A. No.

9 Q. Okay. Can you give us then, please,
10 sort of in chronological order, if you could,
11 the various projects that you've been involved
12 with?

13 A. In research and development at
14 Philip Morris?

15 Q. Yes, sir.

16 A. Well, there was the first project we
17 talked about earlier.

18 Q. Yes, sir.

19 A. Smoke condensate studies, it was
20 called. Then there was a product-- project that
21 I worked on called biological effects of smoking.

22 Q. And what are you describing when
23 you've described the biological effects of
24 smoking?

25 A. That was just a title. What we

2017015275

1 worked on was in vitro assays, again designed--
2 the reason we did that was to investigate the
3 potential use of such in vitro assays as
4 predictive tools for mouse skin painting
5 activity.

6 Q. Were you able to come up with some
7 predictors, if you will?

8 A. No, we were not.

9 Q. How long did that project take?

10 A. How long did that project take?

11 Q. Yes, sir. How many months did you
12 work on that project or years or--

13 A. How long was I associated with that
14 project?

15 Q. Yes.

16 A. A little over eight years.

17 Q. Is that project concluded?

18 A. Does that project still exist? Is
19 that your question?

20 Q. Okay.

21 A. Yes, it still exists.

22 Q. And have they still not been able to
23 define any predictors?

24 A. That's correct, not to my knowledge.

25 Q. Is there something wrong with the

2017015276

1 way the tests are being done or people or what?
2 If you get negatives for eight years, why did
3 you keep doing them?

4 A. You would have to ask that of R & D
5 management, but, no. What you are trying to do
6 here, Mr. Davis, you have to understand. You
7 are trying to see if you can get a series or a
8 test that will predict what will happen when you
9 apply this whole smoke condensate which we
10 talked about earlier to the back of a mouse.
11 You are applying this stuff weekly or maybe five
12 days a week for a year and a half, and that's a
13 mouse.

14 And over here we're trying to use
15 tests which may be cells in culture, who knows
16 what, and we're trying to see if these results
17 equal the mouse skin results, and you know.

18 Q. They don't?

19 A. That's what I said in answer to your
20 question about did we come up with some
21 predictors.

22 Q. Is what you are telling me then that
23 the tests that you've been performing to
24 determine the biological effects of smoke in
25 vitro have not shown the same results as the

2017015277

1 actual skin painting tests that have been done
2 with whole smoke condensate?

3 A. Yes. In some cases they have, but
4 in most cases they have not, so they are not
5 reliable predictors of mouse skin activity.

6 Q. What is the constituent that is the
7 most reliable predictor from these in vitro
8 studies, if there is one?

9 A. The constituent?

10 Q. The whole smoke condensate, excuse
11 me.

12 A. I don't understand your question.

13 Q. Well, probably because I don't
14 understand it, either. I'm trying to find out
15 if these biological effects of smoke which you
16 have done in vitro for some eight years, if you
17 have been able to identify a particular
18 ingredient or constituent or product in smoke
19 that is more reliable than others in predicting
20 whether or not there will be biological activity
21 when painted on a mouse.

22 A. The answer is no.

23 Q. None of them--

24 A. We haven't found them.

25 Q. Who's in charge of that project now?

2017015278

1 A. Biological effects of smoke project?

2 Do you mean--

3 Q. The name of the man that's in charge
4 of it, if you know.

5 A. I just can't recall right at the
6 moment.

7 Q. He would be in research and
8 development?

9 A. Yes.

10 Q. What was your next project? By the
11 way, do you know the charge number of that
12 project?

13 A. When I worked with the project, it
14 had the charge number of 6906.

15 Q. Okay. What was the next project you
16 worked on?

17 A. There wasn't any. My next job was
18 working on the staff of the director of research,
19 and I'm not sure if we had a charge number or
20 not. It was a staff function.

21 Q. And your title was what at that time?

22 A. Same as it had been before that,
23 senior scientist.

24 Q. But your job responsibilities,
25 instead of staying on the charts 1906--

2017015279

1 A. No, excuse me. That was 6906-- 6906.

2 Q. Your job responsibility as a senior
3 scientist shifted to working with the head of
4 the department there.

5 A. Yes, directly under him, yes.

6 Q. And his name again?

7 A. That's Dr. Thomas S. Osdene,
8 O-s-d-e-n-e.

9 Q. And for how many years did you serve
10 in that function?

11 A. I'm still there. I still work for
12 Dr. Osdene.

13 Q. Oh, I'm sorry. I thought now you
14 were in the science and technology department
15 with him.

16 A. Yes, but the context in which you
17 asked the question was, what did I do after 6906,
18 that project. Well, I worked for Dr. Osdene.
19 At that time he was director of research.

20 Q. Okay. And you have been in this
21 capacity for approximately how long now?

22 A. Seven years. Yes, seven years.

23 Q. What do you do in that capacity?

24 A. We've already gone over that.

25 Q. Is it different than what you have

2017015260

1 already told us this science and technology
2 department does?

3 A. No, it's no different.

4 Q. Do you report to anyone other than
5 Dr. Osadene?

6 A. No.

7 Q. Is part of your activity keeping
8 abreast of the scientific studies that are being
9 done both at your plant-- I mean at your
10 laboratory in Europe and at research and
11 development in the United States?

12 A. I try to keep up with what is going
13 on in research and development, yes.

14 Q. Do you periodically have papers
15 given by project heads that are working on
16 ongoing research?

17 A. I don't think they do that any
18 longer.

19 Q. Do you have any financial interest
20 in Philip Morris?

21 A. Do you mean, do I own any Philip
22 Morris stock?

23 Q. Yes.

24 A. Yes.

25 Q. And I assume you have a retirement

2017015281

1 plan also.

2 A. Yes.

3 Q. Do you have as part of your
4 responsibility working with lawyers representing
5 Philip Morris in litigation?

6 A. As part of my responsibility?

7 Q. Yes.

8 A. Well, I mean I have worked with them
9 in the past. I don't know if that's in the job
10 description, but, yes, I have worked with
11 lawyers.

12 Q. What percentage of your time, say in
13 the last year, would you say you have spent
14 working with lawyers?

15 A. Less than five percent. I mean a
16 very small amount of time.

17 Q. What percent of your time would you
18 spend reviewing scientific papers?

19 A. Well, of course, that will vary, but
20 probably a third, 25-- a quarter to a third of
21 my time. Sometimes more, sometimes less.

22 Q. Do you have as part of your duties
23 writing synopsis or criticisms or summaries of
24 scientific papers?

25 A. Not as a routine, no.

2017015282

1 Q. On special occasions are you called
2 upon to do so?

3 A. I may.

4 Q. Do you recall any specific articles
5 or studies that you have critiqued?

6 A. Not right at the moment, no.

7 Q. Can you give us an idea of
8 approximately how much time you have spent with
9 attorneys in preparation for this deposition
10 today?

11 MR. SCARBORO: I'm going to object
12 and instruct the witness not to answer. That's
13 getting into attorney-client privilege material.
14 BY MR. DAVIS:

15 Q. Who did you meet with in preparation
16 for this deposition today?

17 MR. SCARBORO: Same objection.
18 Instruct the witness not to answer.
19 BY MR. DAVIS:

20 Q. What did you read in preparation for
21 this deposition?

22 MR. SCARBORO: Same objection.
23 Instruct the witness not to answer.
24 BY MR. DAVIS:

25 Q. Were you given any depositions to

2017015283

1 read or study in preparation for this deposition?

2 MR. SCARBORO: Same objection. Same
3 instruction.

4 BY MR. DAVIS:

5 Q. Have you read the deposition of Dr.
6 Vic De Noble?

7 A. No, I have not.

8 Q. Has anyone told you what is
9 contained in that deposition?

10 MR. SCARBORO: Instruct the witness
11 not to answer on the grounds of attorney-client
12 privilege.

13 BY MR. DAVIS:

14 Q. Have you read any internal documents
15 provided to you from Philip Morris in
16 preparation for this deposition?

17 MR. SCARBORO: Same objection. Same
18 instruction.

19 BY MR. DAVIS:

20 Q. Would you normally read Philip
21 Morris documents in your daily activities such
22 as you read in preparation for this deposition?

23 MR. SCARBORO: Same objection. Same
24 instruction. Well, if you can't do it by the
25 front door, you can't do it by the back door.

2017015284

1 MR. DAVIS: Well, I think we are
2 probably going to have to reconvene the
3 deposition another time in Texas. We are
4 entitled to see anything a witness used in
5 preparation for a deposition, any written
6 materials. But we'll take it up with the judge.
7 I'm simply asking you to allow us to investigate
8 that.

9 MR. SCARBORO: Well, let's go off
10 the record for a moment.

11 MR. DAVIS: It's noon. Do you all
12 want to take a break for lunch? Do you want to
13 keep going?

14 MR. SCARBORO: Let's see if we can
15 resolve this.

16 MR. MARONEY: I want to take a break
17 sometime.

18 (Discussion off the record.)

19 BY MR. DAVIS:

20 Q. Tell us what documents you reviewed,
21 please, in preparation for the deposition today
22 that you would not normally review but for
23 having your deposition taken today.

24 A. None.

25 Q. Did you review any documents

2017015285

1 concerning projects 1600 or 1610?

2 A. I'm not sure I remember exactly what
3 those projects were, so I can't identify them
4 from the numbers.

5 Q. Tell us what documents you did
6 review.

7 A. For?

8 Q. What were they?

9 A. Again, I don't understand the
10 question.

11 Q. In preparation for this deposition.

12 A. I was shown one or two documents,
13 which I understand were part of documents
14 furnished to you relevant to the work of Vic
15 De Noble.

16 Q. Anything else?

17 A. No, not that I can recall.

18 Q. All right. Dr. Pages, back in 1954,
19 your company, Philip Morris, issued a statement
20 that, "We believe the products we make are not
21 injurious to health." To your knowledge, is
22 that still your company's position today?

23 MR. SCARBORO: Object. Lacks
24 foundation.

25 THE WITNESS: Yes.

2017015286

1 BY MR. DAVIS:

2 Q. Have you attended any meetings at
3 Philip Morris in which your company's position
4 that your products are not injurious to health
5 have been discussed?

6 A. No.

7 Q. To your knowledge, has your company
8 engaged in any type of studies to determine
9 whether or not their products are injurious to
10 health?

11 A. Here, of course, we're referring to
12 injurious to the health of people.

13 Q. Yes.

14 MR. SCARBORO: Object. Lacks
15 foundation.

16 THE WITNESS: We, of course, have
17 conducted a large amount of research, some of
18 which we have alluded to in earlier questions
19 that you have asked which bear on that question,
20 but they are not studies in people. They may be
21 studies in animals.

22 BY MR. DAVIS:

23 Q. Okay.

24 A. But I mean some people may claim
25 that that is of relevance to the question that

2017015287

1 you asked. So to that extent, yes, the answer
2 is yes.

3 Q. Okay. We'll come back to that in a
4 moment. Give us a brief history if you would,
5 please, of Philip Morris as you understand it.

6 MR. SCARBORO: Object. Lacks
7 foundation. Prior to the witness' employment at
8 Philip Morris?

9 BY MR. DAVIS:

10 Q. If you are aware of it.

11 A. I mean I have seen it, but I'm not
12 aware of it. I'm not knowledgeable about when
13 the company was founded and that sort of stuff.
14 No, I just don't know that.

15 Q. Okay. Give us an idea, if you would,
16 please, of the physical plant facilities of
17 Philip Morris. Where is your home office?
18 Where are your research and development
19 facilities? What facilities are you aware of in
20 existence?

21 A. Well, we have a corporate office
22 headquarters. That's in New York, New York City.
23 And then research and development department is
24 located in Richmond, Virginia.

25 Q. Where are your manufacturing plants?

2017015288

1 A. Well, we have manufacturing plants
2 in different areas. We have a manufacturing
3 facility in Richmond, Virginia, and we have at
4 least two others in the United States.

5 Q. Where?

6 A. One is in Louisville, Kentucky and
7 the other is in Cabarrus County, North Carolina.

8 Q. Do you have manufacturing plants in
9 other nations?

10 A. Yes.

11 Q. Where?

12 A. Well, I don't know all of them. I
13 know we have a company, Philip Morris-Germany,
14 which manufactures cigarettes in Munich and
15 Berlin. And I know we have some other plants in
16 Europe, one in Switzerland, one in Holland. I
17 think we have a small plant in England, in the
18 United Kingdom. I'm sure we have many more, but
19 I, you know, I don't know all of them.

20 Q. Do you have as part of your duties
21 and responsibilities going to any of the
22 manufacturing plants for any purpose?

23 A. No.

24 Q. Is your work confined to the
25 research and development department at the

2017015289

1 Richmond facility?

2 A. Generally, yes.

3 Q. Okay. Have you ever been called
4 upon to be the company representative to any
5 meetings with the Council for Tobacco Research?

6 A. No.

7 Q. For the Tobacco Institute?

8 A. No.

9 Q. For the Tobacco Chemists Association?

10 A. No.

11 Q. Have you ever attended any meetings
12 of the Council for Tobacco Research?

13 A. No.

14 Q. Or the Tobacco Institute?

15 A. No.

16 Q. What type of meetings have you
17 attended in fields related to the production of
18 tobacco?

19 MR. SCARBORO: Object. The question
20 is vague and ambiguous.

21 THE WITNESS: I'm sorry. I'm having
22 a lot of difficulty with your question. You
23 asked me, I think, what meetings have I attended
24 relative to the production of tobacco?

25 BY MR. DAVIS:

2017015230

1 Q. Yes.

2 A. As a representative of Philip Morris?

3 Q. Yes.

4 MR. SCARBORO: Meetings outside of
5 Philip Morris?

6 MR. DAVIS: Yes.

7 THE WITNESS: You mean like a
8 technical meeting or a society meeting?

9 BY MR. DAVIS:

10 Q. An association of some sort that
11 they requested you to go to.

12 A. I attended one meeting I can recall,
13 which is a CORESTA meeting which was held in
14 Winston-Salem, North Carolina.

15 Q. What is CORESTA?

16 A. CORESTA is an international
17 organization of cigarette-- mainly cigarette
18 manufacturers. But it's not confined just to
19 producers. And it's a research-- kind of an
20 international cooperative research group.

21 Q. Do you have a CV, curriculum vitae?

22 A. Yes, I guess so.

23 Q. Would you have any objection to
24 providing us with a copy of it?

25 A. No, not if I make sure it's up to

2017015291

1 uate.

2 Q. Okay. I'll ask you when you get to
3 this point in your deposition that you attach an
4 up-to-date CV, if you would, please. Have you
5 ever had occasion to meet with any scientists
6 for the American Tobacco Company?

7 A. Again, have I ever met-- you are
8 asking me if I ever met any scientists from the
9 American Tobacco Company?

10 Q. Let's take that first. Have you
11 ever met any scientists that you are aware of?

12 A. Yes.

13 Q. Do you recall them by name?

14 A. I can recall one name.

15 Q. Dr. Leake?

16 A. I met Dr. Leake, yes.

17 Q. Is he the only scientist in that
18 company?

19 MR. SCARBORO: Object. Lacks
20 foundation.

21 MR. DAVIS: I agree. Move to strike
22 the question.

23 BY MR. DAVIS:

24 Q. Have you met with Dr. Leake on
25 occasion?

2017015292

1 A. I have met Dr. Leake once, I believe.

2 Q. Okay. Have you ever had occasion to
3 discuss with Dr. Leake or anyone else from
4 American Tobacco the results of your smoke
5 condensate studies?

6 A. No, I don't think so.

7 Q. Have you had occasion to share any
8 information with American Tobacco Company
9 concerning any testing that's been done at
10 Philip Morris?

11 MR. MARONEY: I object to the form
12 of the question, asking if he had any occasion.
13 If you want to ask him, has he ever done that,
14 that's one thing.

15 BY MR. DAVIS:

16 Q. Have you ever done that?

17 A. I'm going to have to ask if I can
18 consult with my own counsel, please, before I
19 answer that.

20 Q. All right.

21 MR. SCARBORO: Off the record,
22 please.

23 (Discussion off the record.)

24 MR. SCARBORO: Back on the record.

25 BY MR. DAVIS:

2017015293

1 Q. Dr. Pages, before we broke, I asked
2 you a question, if you had met with Preston
3 Leake from American Tobacco and discussed the
4 results of any tests or studies. And you asked
5 to have an opportunity to confer with your
6 attorney before you answered that question.

7 MR. MARONEY: That is not the
8 question. He told you that he had met Leake
9 before, and he had not discussed any matters
10 with Leake about his condensate work. The
11 question now standing was something to the
12 effect-- this lady can read it back.

13 MR. DAVIS: Yes, I'll ask the lady
14 to read it back for us.

15
16 (The question beginning on Page 108,
17 Line 7 was read back at this
18 time.)

19 BY MR. DAVIS:

20 Q. I believe at that point you said
21 before you answer that question you would like
22 to consult with your attorney. Have you now had
23 an opportunity to consult with your attorney?

24 MR. MARONEY: We object to the form
25 of that question because you made a statement.

2017015294

1 if you want to have the question answered, or if
2 you want to restate the question, that's fine,
3 but we object to the form incorporating the
4 comments regarding the consulting with the
5 attorney.

6 BY MR. DAVIS:

7 Q. Did you consult with your attorney
8 prior to answering that question?

9 A. Yes.

10 Q. Now, that you have consulted with
11 your attorney, what is your answer to that
12 question?

13 A. Could I hear it one more time,
14 please?

15 MR. DAVIS: Read it back.

16
17 (The testimony and colloquy
18 beginning on Page 108, Line 7 and
19 ending on Page 108, Line 21 was
read back at this time.)

20 BY MR. DAVIS:

21 Q. Have you now consulted with your
22 attorney?

23 A. Yes.

24 Q. Now, what is the answer to the
25 question?

2017015295

1 A. The answer is no.

2 Q. Why did you have to consult with
3 your attorney to answer no to that question?

4 MR. SCARBORO: Object and instruct
5 the witness not to answer. There are many
6 reasons why Dr. Pages would want to consult with
7 his attorneys, Mr. Davis, and they are none of
8 your business.

9 MR. MARONEY: Hear, hear.

10 MR. SCARBORO: Just take the
11 deposition.

12 BY MR. DAVIS:

13 Q. What have you discussed with Dr.
14 Leake?

15 MR. MARONEY: That mischaracterizes
16 his prior answer. He indicated he had not
17 discussed with Dr. Leake anything. He said he
18 had met Dr. Leake.

19 BY MR. DAVIS:

20 Q. Have you ever discussed anything
21 with Dr. Leake?

22 A. Certainly. I told you I met Dr.
23 Leake once, and I'm sure we talked about
24 something.

25 Q. Do you recall what you talked about?

2017015296

1 A. No. I really don't.

2 Q. Do you recall any discussions you
3 have had with Dr. Leake at any time?

4 MR. FIGARI: I'm going to object.
5 That assumes there was more than one discussion.
6 The witness has already admitted he only met him
7 one time.

8 THE WITNESS: I've only met him one
9 time.

10 BY MR. DAVIS:

11 Q. So you are telling the jury that you
12 have had no discussion with him that you can
13 recall at this time, period.

14 A. That's correct.

15 Q. Have you shared any correspondence
16 with Dr. Leake?

17 A. No.

18 Q. Have you shared any type of written
19 communications of any kind with any scientist
20 from American Tobacco that you are aware of?

21 A. No.

22 Q. Is there any reason why your company
23 doesn't communicate its scientific findings with
24 American Tobacco Company?

25 MR. SCARBORO: Object. Lacks

2017015297

1 foundation.

2 THE WITNESS: Sure.

3 BY MR. DAVIS:

4 Q. What is that?

5 A. We're competitors.

6 Q. Okay. That's the reason?

7 MR. SCARBORO: Object. Lacks
8 foundation.

9 THE WITNESS: I think so, yes.

10 BY MR. DAVIS:

11 Q. Okay. Without telling me the
12 ingredients, give me the types of ingredients
13 that you add to cigarettes manufactured by your
14 company. For example, do you add sweeteners?
15 Can you answer that?

16 A. Yes.

17 Q. And is your answer yes?

18 A. Yes.

19 Q. By generic description, what other
20 types of additives does your company place in
21 cigarette products, such as sweeteners?

22 MR. SCARBORO: Mr. Davis, I'm going
23 to have to ask for an opportunity to consult
24 with the witness just so we don't invade
25 proprietary information. If the witness can

2017015298

1 answer the question on the basis of general
2 categories, as you have just indicated he might,
3 I believe I have no objection, but I need to
4 consults with him briefly.

5 MR. DAVIS: Okay.

6 MR. MARONEY: Why don't we just take
7 lunch break now.

8
9 (LUNCH RECESS)

10
11 BY MR. DAVIS:

12 Q. Dr. Pages, I wanted to ask you one
13 or two more questions about the time when you
14 met Dr. Preston Leake from American Tobacco
15 Company. Where were you when you met him?

16 A. Winston-Salem, North Carolina.

17 Q. Were you at some type of meeting?

18 A. Yes.

19 Q. What type of meeting was this?

20 A. Seminar.

21 Q. What was the subject of the seminar?

22 A. It was the results of some
23 experiments.

24 Q. What type of experiments?

25 A. Best as I can recall, it was some

2017015299

1 experiments that had been done under contract
2 for R. J. Reynolds Tobacco Company.

3 Q. Would you describe those for us,
4 please?

5 A. Yes, I think-- I don't remember the
6 details now, but it was a man from Oak Ridge
7 National Laboratory reporting on the results of
8 some testing he had done relevant to glycerol.
9 I don't remember the exact test--

10 Q. What is glycerol?

11 A. Glycerol is one of number of
12 materials that are added to tobacco to-- they
13 are called humectants to help the tobacco retain
14 moisture so it doesn't dry out.

15 Q. And what was the nature of the
16 glycerol test as you recall?

17 A. I don't recall specifically, so I'm
18 not going to guess. I just don't remember the
19 details of it.

20 Q. Okay. Did it have anything to do
21 with issues of smoking and health?

22 A. I don't know how to answer that.

23 Q. Well, do you recall it being
24 associated with any questions that were being
25 raised about the effect of glycerol on the

2017015300

1 health of a smoker?

2 A. No, I don't recall it in that
3 context, no, not at all.

4 Q. Okay. Does that help refresh your
5 memory as to what context you do recall glycerol?

6 A. It was some testing that I think
7 involved rats or mice, but I don't remember the
8 details of it.

9 Q. Do you know where a person might go
10 to obtain a copy of that study that he was
11 reporting on?

12 A. No, I don't.

13 Q. Do you have a copy?

14 A. No, I do not.

15 Q. Do you have any documents from that
16 seminar?

17 A. I don't know.

18 Q. Do you know what year that was?

19 A. Yeah, I think so. I think it was
20 last year.

21 Q. Do you know what month of last year?

22 A. Yes.

23 Q. Would you tell us?

24 A. July.

25 Q. Do you know what specific location

2017015301

1 in Winston-Salem this seminar took place?

2 A. Yes, at the research and development
3 labs of R. J. Reynolds Tobacco.

4 Q. Other than that instance where they
5 reported on these glycerol tests, have you ever
6 met with other scientists of other tobacco
7 companies to discuss test results?

8 A. No. Not that I can recall, no.

9 Q. To your knowledge or memory, that's
10 the one and only time you have met with other
11 tobacco scientists to discuss tests that other
12 companies performed or had performed?

13 A. Yes, that's right. That's the only
14 time I can recall.

15 Q. Are herbicides or pesticides used in
16 the process of growing tobacco leaf?

17 MR. SCARBORO: Object. Lacks
18 foundation.

19 MR. FIGARI: Object. No personal
20 knowledge.

21 THE WITNESS: That's my
22 understanding, but I am not very knowledgeable
23 about the growing and processing of tobacco.
24 That's not my area of knowledge.

25 BY MR. DAVIS:

2017015302

1 Q. Does your company do any testing to
2 determine pesticide residue levels in the
3 tobacco that's used in your cigarettes?

4 MR. SCARBORO: Object. Lacks
5 foundation.

6 THE WITNESS: Yes, again I don't
7 have any first-hand knowledge, but that's my
8 understanding that it does, yes.

9 BY MR. DAVIS:

10 Q. You have oftentimes seen reports of
11 those tests that come across your desk or
12 circulated in memos in your company?

13 A. No, I don't. I don't recall having
14 seen any of those come across my desk.

15 Q. Okay. Who in your company would be
16 responsible for pesticide residue testing?

17 MR. SCARBORO: If you know.

18 THE WITNESS: The specific
19 individual I don't know.

20 BY MR. DAVIS:

21 Q. What department would have that
22 responsibility?

23 A. Research and development.

24 Q. Can you give me a division within
25 that department that would have that

2017015303

1 responsibility?

2 A. Yes.

3 Q. Who would that be, or what division
4 would that be?

5 A. The analytical research division.

6 Q. Do you know who is in charge of that
7 division?

8 A. Yes.

9 Q. Who?

10 A. The manager of that division is Dr.
11 Robert Fenner, F-e-n-n-e-r.

12 Q. Based upon your knowledge, do you
13 believe Dr. Fenner might be a person who would
14 have knowledge of the pesticide residue testing
15 in your company?

16 MR. SCARBORO: Object. Asked and
17 answered. Lacks foundation.

18 THE WITNESS: I don't know. I'm not
19 sure.

20 BY MR. DAVIS:

21 Q. But you do believe it would fall
22 within that division.

23 A. Yes.

24 Q. Have you ever seen any
25 advertisements of Philip Morris cigarettes that

2017015304

1 states that irritants are removed from your
2 company's products?

3 A. Irritants are removed?

4 Q. Yes.

5 A. I'm not sure. I may have seen such
6 an advertisement that referred to irritants, but
7 I don't--

8 Q. To your knowledge, does your company
9 do anything to remove irritants from the tobacco
10 that's used in your product?

11 MR. SCARBORO: Object. Lacks
12 foundation.

13 THE WITNESS: Here again we would
14 have to establish. I don't know what the term
15 "irritants" means in this context, so I don't
16 know how to answer that question.

17 BY MR. DAVIS:

18 Q. Okay. I think in the context of the
19 advertisements that I have certainly seen it
20 says-- let me just show you what we'll mark as
21 Deposition Exhibits 1 and 2.

22
23 (Pages Deposition
24 Exhibits Nos. 1 & 2 were
25 marked for identification)

2017015305

1 BY MR. DAVIS:

2 Q. Deposition Exhibit 1, I'll show you
3 is from a Time magazine of April 27th, 1942.
4 It's a xerox copy, and it says-- I'll just show
5 that to the camera. It says, "Don't let
6 inhaling worry you. All smokers sometimes
7 inhale, but your throat needn't worry." To your
8 mind is that a health claim concerning Philip
9 Morris cigarettes?

10 MR. SCARBORO: Object. Lacks
11 foundation. This witness is not an expert on
12 consumer expectations.

13 THE WITNESS: May I take a look?

14 MR. FIGARI: Object. Seeks
15 speculation that the document itself is the best
16 evidence of what it says.

17 THE WITNESS: I don't feel qualified
18 to answer that question. I mean I don't know--
19 this is advertising. Advertising is not an area
20 of my knowledge, and I don't know what the heck
21 they are talking about here when they talk about
22 irritating, irritation and so on so--

23 BY MR. DAVIS:

24 Q. Is there irritation in the smoking
25 of cigarettes, to your knowledge?

2017015306

1 MR. SCARBORO: Object. Vague and
2 ambiguous without some definition of the word
3 "irritation."

4 THE WITNESS: That's exactly the
5 problem. I don't understand what that term
6 means.

7 BY MR. DAVIS:

8 Q. Okay. That's fine. If you don't
9 understand it, we appreciate your telling us.
10 Let me show you what I have marked as Deposition
11 Exhibit No. 2. It says, "Sure you inhale so
12 play safe with your throat. You can't avoid
13 some inhaling, but you can avoid worrying about
14 throat irritation even when you do inhale." To
15 your knowledge, is there any throat irritation
16 associated with smoking Philip Morris cigarettes?

17 MR. SCARBORO: Before you answer
18 that, I want to lodge a general objection to
19 reading a document and then asking the witness a
20 question for which that reading was not a
21 necessary predicate in an effort apparently to
22 get the document in evidence surreptitiously.
23 This witness cannot identify these documents.
24 We don't know where they come from. I don't
25 know what they are about. The witness is not an

2017015307

1 expert on the subject, and I object to the whole
2 line of questioning. If you want to ask him
3 questions, ask him questions.

4 MR. FIGARI: Excuse me. I want to
5 object further, Mr. Davis, on the grounds, first
6 of all, you haven't identified PX 2 even for the
7 record, and I object further because from where
8 I'm standing and looking at the exhibits they
9 appear to pertain to a brand that is not even
10 involved in this suit.

11 BY MR. DAVIS:

12 Q. Does Philip Morris make Philip
13 Morris cigarettes?

14 A. Yes.

15 Q. Do they remove an irritant from
16 Philip Morris brand cigarettes that they don't
17 remove from Marlboro cigarettes?

18 MR. SCARBORO: Object. The question
19 is vague and ambiguous.

20 MR. FIGARI: Objection. Seeks
21 speculation.

22 THE WITNESS: The biggest problem I
23 have with these questions, Mr. Davis, is I need
24 a definition of irritant. I don't understand
25 what that means.

2017015308

(Pages Deposition
Exhibit No. 3 was
marked for identification)

BY MR. DAVIS:

Q. I'm going to show you Deposition Exhibit 3, which is another advertisement in which it states, "Make one more change, this time to Philip Morris. It's not only good taste, it's good judgment because an irritant (sic), a source of the irritation in other cigarettes, is not used in the manufacture of Philip Morris." Now, what I want to ask you, sir, with regard to Exhibit No. 3, is there an irritant that is common to cigarettes other than Philip Morris brand cigarettes made by your company--

MR. SCARBORO: Same objection.

BY MR. DAVIS:

Q. -- that you are aware of?

MR. FIGARI: Objection. Seeks speculation, particularly as to other brands.

THE WITNESS: I don't know.

MR. SCARBORO: Same objection as the prior questions.

THE WITNESS: My answer is, I don't

2017015309

1 know.

2 BY MR. DAVIS:

3 Q. Can you tell us as a scientist what
4 the difference is in different brands of
5 cigarettes made by your company? You make more
6 than one brand, correct?

7 A. Yes.

8 Q. Can you tell us approximately how
9 many brands?

10 A. I don't know. Say a dozen. I'm
11 just making that number up. It could be more.

12 Q. Okay. What I want to know and what
13 I think the jury would like to know, is there
14 any difference in these cigarettes, other than
15 the flavorants that you put in them to change
16 the flavor or the aroma?

17 MR. FIGARI: I'm going to object to
18 the question on the grounds that it suggests
19 that the jury may want to know what you inquired
20 about. It's inappropriate addressing of the
21 witness.

22 MR. SCARBORO: I'm also going to
23 object on the ground that it lacks foundation
24 and the witness has already testified he doesn't
25 know what is in particular in cigarettes. I

2017015310

1 would like to stay away from confidential
2 information, but if the witness can answer on
3 the grounds of a categorical-- the sort of
4 question you asked this morning I think before
5 the lunch break, I have no objection to the
6 witness attempting to answer that question.

7 BY MR. DAVIS:

8 Q. Can you tell us generally what the
9 differences are in different brands of
10 cigarettes?

11 A. No, I can't.

12 Q. Why do some cigarettes have filters
13 and others don't?

14 MR. SCARBORO: Objection. Lacks
15 foundation.

16 THE WITNESS: I'm not sure.

17 BY MR. DAVIS:

18 Q. Did you by any chance attend the
19 proceedings of the Fifth International Tobacco
20 Science Congress in Hamburg, Germany in
21 September of 1970?

22 A. No, I did not.

23 Q. Have you ever attended one of their
24 proceedings?

25 A. What is the name of the organization?

201,015311

1 Q. International Tobacco Scientific
2 Congress.

3 A. I don't think so, no.

4 Q. Have you ever had occasion to read
5 an article, Pesticide Residues in U.S. Tobacco
6 and Tobacco Products by Dr. Jack Sheets?

7 A. I don't know. I don't know if I
8 have seen that or not.

9 Q. Do you know who Dr. Sheets is?

10 A. I have heard of him, but I'm not
11 exactly sure who he is.

12 Q. Have you ever-- excuse me.

13 A. I'm not exactly sure who he is. I
14 have heard the name, yes.

15 Q. Do you have a pesticide residue lab
16 as such in your research and development
17 department?

18 MR. SCARBORO: Object. Lacks
19 foundation.

20 THE WITNESS: As such I'm not sure.
21 I don't know.

22 BY MR. DAVIS:

23 Q. Okay. What is DDT?

24 A. DDT was a pesticide that was widely
25 used after World War II.

2017015312

1 Q. And what is FDE?

2 A. I think it's another pesticide. I
3 don't know exactly how it relates--

4 Q. To your knowledge, have those
5 products been banned for use in the United
6 States?

7 MR. SCARBORO: Object. Lacks
8 foundation.

9 THE WITNESS: I believe DDT was
10 banned some time ago. I don't know really
11 anything about the other one you have referred
12 to.

13 BY MR. DAVIS:

14 Q. Okay. Do you know why it was banned?

15 A. I think I have some general
16 knowledge of why it was banned. I think it was
17 banned-- there was concern about ecological
18 damage, bird shells off of it and so on. It's
19 the kind of thing that Rachel Carson raised, and
20 I think there was also some biological testing
21 done that pointed to animals. Rodents fed large
22 doses of DDT developed some sort of tumors in
23 the lifetime feeding study.

24 Q. Do you know if tobacco used in the
25 manufacture of Marlboro cigarettes would have

2017015313

1 contained DDT residues at any time?

2 A. Do I know that? No, I don't know
3 that.

4 Q. To your knowledge, has your company
5 ever done anything to remove DDT residues from
6 tobacco used in your products?

7 A. That's not my area, so no. The
8 answer is no, not to my knowledge.

9 Q. Do you know if DDT residues are
10 still present on tobaccos imported into the
11 United States from other countries?

12 A. No, I don't know that.

13 Q. Is there someone in your company who
14 has the responsibility of making that
15 determination?

16 A. I would think so, but I don't know
17 who that is.

18 Q. Are you aware that cigarettes
19 manufactured by Philip Morris do, in fact,
20 contain DDT residues?

21 MR. MARONEY: Asked and answered.

22 MR. SCARBORO: Object. Asked and
23 answered. Misstates the evidence.

24 THE WITNESS: You mean today?

25 BY MR. DAVIS:

2017015314

1 C. Yes.

2 A. No, I'm not aware of that. I mean I
3 don't know.

4 Q. Would you think it would be safe for
5 cigarettes manufactured by your company today to
6 contain DDT residues?

7 MR. SCARBORO: Object. Lacks
8 foundation. It's vague and ambiguous.

9 THE WITNESS: Again, I don't know.

10 BY MR. DAVIS:

11 Q. Is that a question you would want
12 someone to find out before they sold cigarettes
13 with DDT residues?

14 MR. SCARBORO: Same objections.

15 THE WITNESS: That's not my-- I'm
16 not sure I understand what you are asking me
17 there. You are asking me-- go ahead. Please
18 restate that.

19 BY MR. DAVIS:

20 Q. Do you think Philip Morris should
21 make a determination of whether or not it's safe
22 to have cigarettes with DDT residues in them
23 before products are sold with DDT residues?

24 MR. SCARBORO: Same objection.
25 Lacks foundation. Vague and ambiguous. Asks

2017015315

1 the witness to speculate.

2 THE WITNESS: I don't know. I would
3 have to look into that. I don't have any basis
4 for answering that question right now.

5 BY MR. DAVIS:

6 Q. To your knowledge has your company
7 ever discussed any type of a warning on
8 cigarettes to warn consumers that there are DDT
9 residues contained in the product?

10 MR. SCARBORO: Objection. Lacks
11 foundation.

12 THE WITNESS: I don't know if they
13 ever have.

14 BY MR. DAVIS:

15 Q. Has your company participated in a
16 committee chaired by Dr. Preston Leake called
17 the Tobacco Industry Technical Committee to
18 determine pesticide residue levels in tobacco
19 used in the manufacture of cigarettes?

20 MR. FIGARI: Object to form.

21 MR. SCARBORO: I'm just going to
22 object to as compound. I think there's at least
23 three questions.

24 BY MR. DAVIS:

25 Q. Well, let's break it down. Have you

2017015316

1 ever heard of the Tobacco Industry Technical
2 Committee?

3 A. I think I have heard that term, yes.

4 Q. Do you know Dr. Preston Leake was a
5 chairman of that committee for a period of time?

6 A. No, I did not know that.

7 Q. Did you know that that committee
8 developed a list of pesticides used in the
9 production and processing of tobacco in
10 different countries around the world?

11 MR. SCARBORO: Object. Assumes
12 facts not in evidence. Misstates the evidence.

13 THE WITNESS: No, I did not know
14 that.

15 BY MR. DAVIS:

16 Q. To your knowledge did anyone in your
17 company participate as a member of that
18 committee?

19 A. To my knowledge? No, I don't know.

20 Q. You did not, at any rate.

21 A. No, I did not.

22 Q. Did anyone ever call to your
23 attention the results of the study performed by
24 that committee on pesticide residues?

25 A. Not that I can recall, no.

2017015317

1 Q. And did you ever hear it discussed
2 in research and development what those results
3 were?

4 A. No, I did not hear that.

5 Q. I'm going to ask you if you would
6 agree that chronic effects are possible from
7 exposure to sublethal levels of pesticides in
8 cigarette smoke?

9 MR. SCARBORO: Object. Lacks
10 foundation.

11 MR. FIGARI: Objection. No
12 qualification shown.

13 MR. SCARBORO: It asks the witness
14 to express an opinion on an inadequate basis
15 without establishing the expertise of the
16 witness.

17 THE WITNESS: Apart from anything
18 perhaps being possible, I don't know how to
19 answer that question. You would have to define
20 to me what you are talking about, what
21 pesticides, what levels, you know, what is the
22 basis for that. I don't know how to answer that
23 question.

24 BY MR. DAVIS:

25 Q. Okay. Has your company ever warned

2017015318

1 consumers about potential chronic health effects
2 from exposure to DDT residues in cigarette smoke
3 to your knowledge?

4 MR. SCARBORO: Object. Lacks
5 foundation.

6 THE WITNESS: Not to my knowledge,
7 no.

8 BY MR. DAVIS:

9 Q. Do you know what maleic hydrazide is?

10 A. Again, this is not my area of
11 knowledge, but I believe maleic hydrazide is a
12 material that was used or is used-- I don't know
13 which-- in the growing of tobacco for something
14 like sucker control or something.

15 THE REPORTER: What control?

16 THE WITNESS: Sucker, s-u-k-e-r
17 (sic). I think, but I'm not-- that's not my
18 area.

19 BY MR. DAVIS:

20 Q. You've never done any work with
21 maleic hydrazide?

22 A. No.

23 Q. You wouldn't know which formulations
24 may have been contaminated and which may have
25 not been.

2017015319

1 MR. MARONEY: Or whether any were.

2 BY MR. DAVIS:

3 Q. Or whether any were.

4 A. Contaminated-- no, not at all.

5 Contaminated with what?

6 Q. Hydrazide.

7 A. No, I don't know anything about that.

8 Q. Okay. Are there any carcinogenic
9 agents in cigarette smoke?

10 MR. FIGARI: Objection. No
11 foundation.

12 MR. SCARBORO: Objection. Lack of
13 specificity. It's vague and ambiguous.

14 THE WITNESS: Again I don't
15 understand your question. You will have to
16 define for me what you mean.

17 BY MR. DAVIS:

18 Q. What does carcinogen mean to you as
19 a chemist?

20 A. It would be-- my definition of that
21 term would be a material which has been shown in
22 any way under any condition to form-- to produce
23 tumors in animals, in animal testing.

24 BY MR. DAVIS:

25 Q. Okay.

2017015320

(Pages Deposition
Exhibit No. 4 was
marked for identification)

BY MR. DAVIS:

Q. I'm going to mark as Exhibit 4 a blank sheet of paper, which is simply lined paper. And I'm going to put down one side a line and make a 90 degree angle. And I would like to explore with you a moment a line of inquiry that simply suggests that if we put over here (indicating) carcinogens on the lower left-hand side of the line and use carcinogens as those substances as you've described which will always produce cancer when applied to-- in a biological study--

MR. SCARBORO: Object. Misstates the witness' testimony.

BY MR. DAVIS:

Q. I didn't mean to. Please restate what a carcinogen is, because I do want to use your definition.

A. I said that at any time under any conditions had been shown to-- the conditions are extremely, extremely important.

2017015321

1 Q. Okay. Okay. Let's use that as
2 carcinogens.

3 MR. SCARBORO: Producing a tumor,
4 whether malignant or nonmalignant?

5 THE WITNESS: Correct. Thank you.

6 BY MR. DAVIS:

7 Q. Okay. Let's use that. And let's
8 draw a line and say that on any given animal or
9 any given study we have a substance that will
10 constantly produce tumors, okay? Are you with
11 me so far?

12 A. Go ahead.

13 Q. Then let's say there are other
14 substances such as tumor promoters. Are you
15 aware of the term tumor promoters?

16 A. I have heard the term, yes.

17 Q. Is it correct that there are
18 substances known as tumor promoters that when
19 improved with carcinogen produces an increase in
20 the level of tumors that is produced with just
21 carcinogens?

22 A. No, your science is faulty there,
23 Mr. Davis.

24 Q. Okay. Please correct me because I
25 am trying to get to the heart of this. What do

2017015322

1 promoters do?

2 A. First of all, let's make absolutely
3 certain we understand what we're talking about
4 here. We're talking about animals, not people.

5 Q. Okay.

6 A. So the relevance of any of this to
7 humans, human cancer, I'm not sure anyone knows.
8 These types of phenomena you've been describing
9 or you alluded to with the term promoter, in
10 fact, the term promoter developed out of results
11 from mouse skin painting experiments done four
12 years ago. And the real definition of promoter
13 is a material which by itself applied to the
14 back of a mouse over the lifetime of the animal
15 does nothing, does not produce any tumors;
16 however, which when such a material is applied
17 after a dose of another material does produce
18 tumors.

19 And as another important
20 qualification that dose of that other material
21 has to be such that it's low enough that by
22 itself it will produce little or no tumors.
23 It's only when you apply what you call the
24 initiator followed then by the promoter for the
25 lifetime of the animal you get tumors. That's

2017015323

1 the classical observation on which the
2 phenomenon of mouse skin tumor promotion is
3 based.

4 Q. Is that sort of a synergistic effect,
5 the combination of the two?

6 MR. FIGARI: Objection. No
7 qualification shown.

8 THE WITNESS: No one knows the
9 mechanism of that effect. So I don't know-- you
10 used that term. I don't know whether or not it
11 applies to this situation or not.

12 BY MR. DAVIS:

13 Q. Okay. Now, using your definitions
14 of initiators and promoters, is cigarette smoke
15 a promoter of tumors in these tests that you
16 have described?

17 MR. SCARBORO: Object. Lack of
18 foundation. Vacant and ambiguous.

19 MR. FIGARI: Objection. No
20 qualification and indefinite.

21 THE WITNESS: Are we talking about
22 mouse skin testing?

23 BY MR. DAVIS:

24 Q. Yes.

25 A. Again, with the proviso that mouse

2017015324

1 skin testing is dependent on the strain of mice
2 used, how it's conducted and is of uncertain
3 relevance to humans to say the least, yes, you
4 can conduct experiments with mouse skin painting
5 to show that cigarette smoke condensate can have
6 some promoting activity, yes.

7 MR. FIGARI: Objection. Nonresponsive.

8 Move to strike.

9 BY MR. DAVIS:

10 Q. I want to show you what has been
11 been marked as Exhibit 5.

12
13 (Pages Deposition
14 Exhibit No. 5 was
15 marked for identification)

16 MR. SCARBORO: May I ask a question?

17 MR. DAVIS: Yeah.

18 MR. SCARBORO: Did you intend that 4
19 be a deposition exhibit?

20 MR. DAVIS: Pretty poor exhibit,
21 wasn't it?

22 MR. SCARBORO: You've got a line
23 drawn in there that I don't think-- I mean I
24 think--

25 BY MR. DAVIS:

2017015325

1 Q. Let's see if we can make this make
2 sense, Dr. Pages. Let's go back to No. 4.

3 MR. SCARBORO: Maybe I shouldn't
4 have asked.

5 MR. DAVIS: That's all right. We
6 like to have a clean record.

7 BY MR. DAVIS:

8 Q. Let's make a squiggly line and call
9 that promoter. And let's-- should we remove
10 "carcinogens" and put "initiator?" Would that
11 make this more meaningful?

12 A. If you are drawing a graph, I think
13 the first thing you have got to do is label the
14 axes. What is on the y axis--

15 Q. Okay. What should we--

16 A. Well, this is your graph, Mr. Davis.
17 Now you tell me.

18 Q. Let's put "increased tumor incident."
19 Would that be correct?

20 A. I think that would be all right, yes.

21 Q. Let's put increased tumor incident
22 (indicating).

23 MR. SCARBORO: On the backs of mice.

24 MR. DAVIS: Yes, we're talking about
25 the backs of mice.

2017015326

1 THE WITNESS: Why don't we write
2 that down because that's pretty important.

3 MR. SCARBORO: Some nice, on the
4 basis of mouse skin paintings.

5 MR. MARONEY: He--

6 MR. DAVIS: It's my deposition, my
7 exhibit.

8 MR. MARONEY: But it's your exhibit
9 too. It's not ours. That arbitrary--

10 MR. DAVIS: Let's put this--

11 MR. MARONEY: -- line there that's
12 squiggly, there's no testimony to support--

13 BY MR. DAVIS:

14 Q. -- increased amount of substance.
15 Would that be accurate?

16 A. No.

17 Q. That wouldn't be correct?

18 A. No.

19 Q. Increased period of time?

20 A. Yes.

21 Q. Would that be the way to phrase it,
22 increased time length?

23 A. Just time.

24 Q. Just put time?

25 A. Just put time and maybe put in

2017015327

1 parenthesis eight months or something like that,
2 or days, whatever. That's a long time, though,
3 you are talking about here for a mouse, year and
4 a half probably.

5 Q. Okay. What I want to show, and I'll
6 put in here so that this has some meaning, if we
7 have a graph that has an increased tumor
8 incidence as one axis and a delay of time in
9 another axis, if we start with an initiator and
10 we add to that cigarette smoke as a promoter, it
11 will show an increased incident in tumor
12 production over a period of time on mice. And
13 I'm not trying to show by this curve that that's
14 the increase. I'm just trying to show
15 illustratively that there is an increase in
16 tumor production. Is that a fair summation?

17 THE WITNESS: Well, that's a little
18 too glib.

19 MR. FIGARI: Dr. Pages, I'm going to
20 object to the use of the exhibit and the
21 testimony in the fashion, number one, it's not
22 fact based. Number two, you have not
23 established a foundation for the exhibit through
24 the witness. And three, I think the exhibit is
25 misleading.

2017015328

1 BY MR. DAVIS:

2 Q. Okay. Dr. Pages, I want you to take
3 this sheet of paper and draw me a graph which
4 illustrates how cigarette smoke can act as a
5 promoter in these type of tests.

6 MR. SCARBORO: If you can do that,
7 Dr. Pages, without any studies or any
8 information or any data.

9 BY MR. DAVIS:

10 Q. Simply based on your knowledge.

11 MR. SCARBORO: I'm going to object
12 that it lacks foundation, and it can't be
13 accomplished by the witness.

14 MR. FIGARI: I'm going to object on
15 the basis that there's no qualification.

16 THE WITNESS: I don't want to rely
17 on my recollection for something like this. I
18 mean there's certainly published papers. You
19 may recall our original date for a deposition
20 involved an infamous 8,000 articles. Among
21 those articles are papers which in fact would
22 have curves I think what you are after. And I'd
23 like to-- before drawing anything for you right
24 here, I would like to refresh my memory and
25 consult what is in the literature on these

2017015329

1 phenomena.

2 BY MR. DAVIS:

3 Q. That's fair enough, and we will
4 allow you to do that and reconvene your
5 deposition at a time in the future when you have
6 had an opportunity to do that.

7 MR. SCARBORO: Well, I'm going to
8 object. The witness is here. He's here today,
9 and we don't intend to produce him again. These
10 documents have been available for your
11 inspection. You could have used them at the
12 deposition today.

13 MR. FIGARI: And I'm going to object
14 on the basis that counsel can't assign homework.

15 MR. SCARBORO: I like that
16 objection, and I want to specifically join it.

17 BY MR. DAVIS:

18 Q. Dr. Pages, for the purposes of this
19 deposition then, can we simply state that
20 without regard to the degree, cigarette smoke is
21 a promoter of cancer initiators when applied to
22 the backs of a certain strain of mice?

23 MR. FIGARI: Objection. Indefinite,
24 particularly in its use in reference to the term
25 cigarette smoke because it doesn't define the

2017015330

1 brand, the time or any other appropriate
2 conditions.

3 MR. SCARBORO: Objection. Asked and
4 answered.

5 THE WITNESS: You know, that's what
6 I was going to say. You have already asked me
7 that question, and I think I have already
8 answered by saying that yes, there are examples
9 in the literature which fit what you just said.

10 BY MR. DAVIS:

11 Q. And there are also examples in tests
12 your company has actually performed or
13 contracted to have performed, correct?

14 MR. MARONEY: Objection. No
15 foundation.

16 THE WITNESS: Probably, but I would
17 want to check.

18 BY MR. DAVIS:

19 Q. I'm going to hand you now Deposition
20 Exhibit 5, which is entitled Toxic Agents in the
21 Gas Phase of Cigarette Smoke. Have you ever had
22 an opportunity to study any of the graphs in the
23 surgeon general's reports concerning the toxic
24 agents in the gas phase of cigarette smoke?

25 A. Any of the graphs?

2017015331

1 Q. Yes, any of the charts.

2 MR. SCARBORO: Can you identify
3 where this comes from?

4 MR. DAVIS: 1980 surgeon general's
5 report.

6 THE WITNESS: 1980.

7 BY MR. DAVIS

8 Q. I believe.

9 A. Health Consequences of Smoking for
10 Women?

11 Q. That's one--

12 A. That's the 1980 report, I believe.

13 Q. Is that '80?

14 A. Yeah, I think so.

15 Q. Forgive me if I'm wrong, but I
16 thought it was, but I'm probably wrong.

17 A. Yes, I have had occasion to look at
18 on occasion and read in some detail many surgeon
19 general's reports, yes.

20 Q. Do you dispute the biological
21 activity identified for the various agents in
22 the cigarette smoke that is identified on
23 Exhibit 5?

24 A. Do I dispute this column here,
25 biological activities?

2017015332

1 Q. Yes.

2 A. Do I dispute that?

3 A. Yes.

4 MR. FIGARI: And I'm going to object
5 on the basis that there's been no showing that
6 the witness has sufficient basis or knowledge on
7 which to engage in a debate or dispute.

8 BY MR. DAVIS:

9 Q. Let's back up. Your first job was
10 to identify constituents in smoke, is that
11 correct, when you came to Philip Morris?

12 A. Well, that's a little oversimplified,
13 but as we talked about, it was to fractionate
14 cigarette smoke condensate for making it easier
15 to identify components in fractions, yes.

16 Q. Can you identify for me the first
17 agent identified or shown on Exhibit 5? Can you
18 pronounce that for me?

19 A. Yes, dimethylnitrosamine.

20 Q. Is that an agent found in the gas
21 phase of smoke?

22 A. I'm not sure what phase of smoke
23 it's found in.

24 Q. Is it found in some phase of smoke?

25 A. It's been reported in cigarette

2017015333

1 smoke, yes.

2 Q. Do you know if that's a carcinogen
3 or not?

4 A. It hasn't been shown to be a human
5 carcinogen.

6 Q. Has it been shown to be an animal
7 carcinogen?

8 A. Yes, there are test results
9 involving various types of animals where high
10 doses of this material administered have
11 produced tumors, yes.

12 Q. Is that agent found in Marlboro
13 cigarettes?

14 A. I don't know.

15 Q. Have you ever done any tests to
16 determine if it is found in Marlboro cigarette
17 smoke?

18 A. Have I done?

19 Q. Or your company, to your knowledge.

20 MR. FIGARI: Objection. Seeks
21 hearsay.

22 THE WITNESS: I don't know.

23 BY MR. DAVIS:

24 Q. Can you pronounce the next agent?

25 A. Yes, that's ethylmethylnitrosamine.

2017015334

1 Q. And is that a carcinogen in certain
2 animals?

3 A. That's my understanding, yes.

4 Q. Is that also an agent that's found
5 in cigarette smoke?

6 A. I think there are some reports of
7 its presence in cigarette smoke, yes.

8 MR. FIGARI: Objection. Hearsay.
9 Move to strike.

10 BY MR. DAVIS:

11 Q. Do you know if that's found in
12 Marlboro cigarettes?

13 A. I don't know.

14 Q. What is the next agent?

15 A. Diethylnitrosamine.

16 Q. And is that agent a carcinogen in
17 animals?

18 MR. SCARBORO: By carcinogen you
19 mean an agent that has been found in some
20 studies to produce a tumor, whether malignant or
21 benign, in some animals under some circumstances
22 given some dosage at any time.

23 BY MR. DAVIS:

24 Q. I'm just going to use it as generic
25 carcinogen. If he can't answer it in that way,

2017015335

1 fine.

2 MR. SCARBORO: I just want to make
3 sure that there's an understanding here about
4 what the meaning of the word carcinogen is.

5 BY MR. DAVIS:

6 Q. Okay.

7 A. That's certainly the meaning of the
8 word carcinogen in the context of my answers so
9 far, that-- the definition I gave Mr. Davis
10 earlier was any time under any circumstances.
11 We're not arguing about whether or not these
12 levels here reported in cigarette smoke have any
13 relevance at all to producing cancer in animals
14 or anything else because the answer is they
15 don't in animals.

16 Q. Would you voluntarily ingest this
17 first agent?

18 A. I don't understand what you mean by
19 that.

20 Q. You said it was only a carcinogen in
21 animals and it had no relationship to humans.

22 A. In fact, Mr. Davis, I didn't have
23 any bacon this morning, but if I had, I probably
24 would have had some of this material in trace
25 quantities ingested when I eat my bacon.

2017015336

1 Q. Did it go into your lungs?

2 A. I don't know what the-- what happens
3 to orally ingested dimethylnitrosamine. I would
4 have to look.

5 Q. Is there--

6 MR. SCARBORO: Maybe we all had it
7 for breakfast.

8 THE WITNESS: Probably if I breathed
9 the smell of bacon, there may well be some there.
10 I don't know.

11 BY MR. DAVIS:

12 Q. We also have a nitro-- what is that?

13 A. Nitrosopyrrolidine.

14 Q. Is that an agent found in cigarette
15 smoke?

16 A. Yes, I believe that's been reported
17 to be found at very low levels of cigarette
18 smoke.

19 Q. And is that also--

20 MR. FIGARI: Objection. Hearsay.
21 Move to strike.

22 BY MR. DAVIS:

23 Q. And is that also a carcinogen in
24 animal studies?

25 A. That's my understanding.

2617015337

1 Q. Okay.

2 MR. FIGARI: Objection. Hearsay.
3 Move to strike.

4 BY MR. DAVIS:

5 Q. Are there other nitrosamines other
6 than the nitrosamine you just pronounced for me
7 which are found in cigarette smoke?

8 MR. SCARBORO: Object. Lacks
9 foundation.

10 THE WITNESS: Yes.

11 BY MR. DAVIS:

12 Q. Can you tell us some of those
13 nitrosamines?

14 A. Yes.

15 Q. Would you tell us some of those,
16 please?

17 A. N-nitrosornicotine,
18 N-nitrosoanatabine. I don't remember the full
19 chemical name, but it's abbreviated as NNK, all
20 caps.

21 Q. Are those nitrosamines also
22 carcinogenic with animals?

23 MR. SCARBORO: Object. Lacks
24 foundation.

25 THE WITNESS: Under some conditions

2017015338

1 they have been reported to produce tumors in
2 animals.

3 MR. FIGARI: Object. Hearsay. Move
4 to strike.

5 BY MR. DAVIS:

6 Q. We also have hydrazine listed as an
7 agent in cigarette smoke. Is that agent found
8 in cigarette smoke to your knowledge?

9 MR. SCARBORO: Object. Lacks
10 foundation.

11 THE WITNESS: Well, my knowledge is
12 based at the moment on this document, which
13 purports to report a value for it in cigarette
14 smoke.

15 MR. FIGARI: I'm going to object to
16 all the testimony based upon the document as
17 being nothing but a regurgitation of hearsay.
18 Move to strike.

19 MR. SCARBORO: Yeah, I join that.
20 If the witness is doing nothing more than
21 testifying as to what's in the document in front
22 of him, the document is not in evidence and
23 probably couldn't come into evidence. If the
24 witness has no independent knowledge, then I
25 move to strike the testimony for lack of

2017015339

1 foundation.

2 BY MR. DAVIS:

3 Q. From your own studies and studies
4 that have been performed at Philip Morris, can
5 you verify that the agents which you have just
6 read to us are in fact found in cigarette smoke?

7 MR. FIGARI: Objection. Seeks
8 hearsay.

9 THE WITNESS: Well, I don't
10 understand that question. What agents are you
11 asking me about?

12 BY MR. DAVIS:

13 Q. The first six agents that you have
14 read off of this list, Exhibit 5.

15 A. Not all of them, no.

16 Q. Which ones can you not personally
17 verify as being present in cigarette smoke?

18 A. Hydrazine.

19 Q. Okay. With that exception though--

20 A. Well, wait a minute. I'm not sure
21 about the others. This is a question-- are you
22 asking me for my recollection?

23 MR. MARONEY: Yes.

24 THE WITNESS: My recollection is we
25 have found dimethylnitrosamines in smoke and we

2017015340

1 may have found nitrolopyrrolidine in smoke. I'm
2 not-- and then the other nitrosamines, some of
3 which I mentioned to you, yes, we have found
4 those. But I cannot say anything about
5 ethylmethyl or diethyl or hydrazine because I
6 don't know.

7 MR. FIGARI: Objection.

8 Nonresponsive move to strike.

9 BY MR. DAVIS:

10 Q. But all of those that you do recall
11 you have found are in fact carcinogen in certain
12 animal studies, correct?

13 MR. SCARBORO: Object. Asked and
14 answered. Lacks foundation.

15 THE WITNESS: I just answered that
16 question.

17 BY MR. DAVIS:

18 Q. You have already said yes, they were,
19 correct?

20 MR. SCARBORO: Object.

21 Mischaracterizes the testimony.

22 THE WITNESS: Under some species of
23 animals at high doses, yes, they have been shown
24 to produce tumors, yes.

25 BY MR. DAVIS:

2017015341

1 Q. Can you identify any of the other
2 agents shown on Exhibit 5 as agents which either
3 you personally can identify as being in
4 cigarette smoke or you know from work done in
5 your company have been identified as being in
6 cigarette smoke?

7 A. Any of the remaining agents?

8 Q. Yes.

9 A. That's from hydrazine on down?

10 Q. Yes.

11 MR. FIGARI: Objection. Seeks
12 hearsay.

13 BY MR. DAVIS:

14 Q. And those that you do recognize as
15 being present, simply read off to me, if you
16 would.

17 A. Formaldehyde, hydrogen cyanide,
18 acrolein, acetaldehyde, nitrogen oxides,
19 ammonia, pyridine, carbon monoxide.

20 Q. Are all of the agents which you have
21 just read either cocarcinogens. Tumor
22 initiators, bladder carcinogens, cilia toxic
23 agents or toxic agents?

24 MR. SCARBORO: Object. Compound.
25 Lacks foundation.

2017015342

1 THE WITNESS: Again, it seems to me
2 the table speaks for itself. There are
3 designations there behind those-- some of those
4 compounds. I would have to look at it again. I
5 don't know what-- precisely what all these
6 definitions down at the bottom here are based on,
7 but, you know, if you are asking me if that's
8 what the table says, well, you know the table
9 speaks for itself.

10 BY MR. DAVIS:

11 Q. No, I'm asking you--

12 MR. FIGARI: I'm going to object to
13 the answer as being nonresponsive. Move to
14 strike. I'm going to object further on the
15 basis that it now appears from the witness'
16 testimony that all of what he has been doing
17 thus far is merely regurgitating the statement
18 on a document that is yet unauthenticated or yet
19 proven up that counsel showed him in the form of
20 PX 5 and I move to strike on the basis that it
21 is, therefore, nothing but a hearsay recitation.

22 BY MR. DAVIS:

23 Q. What I'm asking you is, from your
24 studies or studies performed by your company,
25 can you identify the agents which you have just

2017015343

1 read as falling into these various categories of
2 cocarcinogens, et cetera?

3 A. No.

4 MR. FIGARI: Objection. Seeks
5 hearsay.

6 BY MR. DAVIS:

7 Q. Okay. Can you tell me when Philip
8 Morris first learned that these agents were in
9 cigarette smoke?

10 A. No, I can't.

11 Q. Was it prior to the time you were
12 hired by the company?

13 A. I don't know.

14 Q. Was it within the last month?

15 A. No, it certainly was not within the
16 last month.

17 Q. Okay. Can you bracket with any
18 degree of accuracy when these agents were
19 identified by your company?

20 A. No, I certainly can't.

21 Q. Has your company--

22 THE WITNESS: Can we take a break?

23

24 (RECESS)

25

2017015344

1 MR. SCARBORO: Before we begin, Mr.
2 Davis, I would like to make just one
3 clarification. You've been asking Dr. Pages
4 about Exhibit 5 and certain agents that appear
5 on that list. And I would just like to have the
6 record reflect that Dr. Pages has not in my
7 understanding done-- personally done experiments
8 on these substances, but his knowledge about
9 them is based upon the general scientific
10 literature as well as work that has been done at
11 Philip Morris in his department. But he himself
12 has not personally conducted these experiments.

13 BY MR. DAVIS:

14 Q. Thank you. Of the agents which you
15 have identified that you believe are in
16 cigarette smoke, to your knowledge has Philip
17 Morris done anything to eliminate those agents
18 from their products?

19 MR. SCARBORO: Object. Lacks
20 foundation.

21 THE WITNESS: Well, I think first of
22 all, if I remember correctly, the question you
23 asked me was whether or not there was-- I had
24 seen information at Philip Morris regarding the
25 presence of these materials. Isn't that the

2017015345

1 question that was asked originally? And I think
2 you mischaracterized what I said in the preface
3 to this question. Now, you are asking me, of
4 these agents, has Philip Morris done anything to
5 remove them?

6 BY MR. DAVIS:

7 Q. Yes.

8 A. From cigarette smoke?

9 Q. Yes.

10 MR. SCARBORO: Same objection.

11 THE WITNESS: Philip Morris has done
12 a lot of research on filtration techniques and
13 other techniques, some of which are quite
14 effective for these materials. And yes,
15 they've-- we've-- Philip Morris has done some
16 work to try to see how to reduce the amounts of
17 these materials in cigarette smoke.

18 BY MR. DAVIS:

19 Q. Is that because Philip Morris
20 recognizes that the presence of these agents in
21 cigarette smoke is hazardous or could be
22 hazardous to the health of their smokers?

23 MR. SCARBORO: Object. Lacks
24 foundation.

25 THE WITNESS: No, I don't think so.

2017015346

1 These and other materials in cigarette smoke
2 from time to time have received publicity by
3 people on the outside as perhaps being
4 potentially harmful. And Philip Morris has
5 always tried to respond to such comments to see
6 what factors could be employed to reduce the
7 amounts of such materials in cigarette smoke.

8 BY MR. DAVIS:

9 Q. Just as a matter of public relations?

10 A. It's more than public relations.

11 Q. What is it?

12 MR. SCARBORO: Object. Lacks
13 foundation of this witness' knowledge.

14 BY MR. DAVIS:

15 Q. What is it?

16 A. Well, some of the work I'm aware of
17 having seen reports on goes back to the time
18 well before I joined the company. So, you know,
19 I can't testify as to the motivation of it, but
20 I mean common sense I think dictates if people
21 say that this material is-- shouldn't be there
22 and may be potentially harmful, common sense
23 would dictate that we might look into, well, why
24 is it there? Where does it come from? What
25 could be done to remove it?

2017015347

1 MR. FIGARI: Objection.

2 Nonresponsive. Move to strike. Object. The
3 answer reveals that the response is predicated
4 on conclusions, speculation and move to strike
5 on that ground as well.

6 BY MR. DAVIS:

7 Q. Which of the agents that are shown
8 on Exhibit 5 would in your opinion be present in
9 Pall Mall-- I mean Marlboro cigarette smoke?

10 MR. SCARBORO: Object. Lacks
11 foundation. Calls for the witness to speculate.

12 THE WITNESS: I don't know. I mean
13 you are asking me to speculate. I don't know
14 the answer to that question.

15 BY MR. DAVIS:

16 Q. Do you have any reason to believe
17 that if your studies show that these agents are
18 present in Philip Morris cigarettes, that it
19 would be isolated to one brand as opposed to
20 another?

21 MR. SCARBORO: Object. Lacks
22 foundation.

23 THE WITNESS: Do I have any reason
24 to believe that? No, I don't.

25 BY MR. DAVIS:

2017015348

1 Q. In your opinion within all
2 probability, it would be present in all
3 cigarettes as opposed just to one brand or
4 another.

5 MR. SCARBORO: Object. Lacks
6 foundation, qualification the witness hasn't
7 been able to establish.

8 MR. FIGARI: Objection. Seeks
9 speculation.

10 THE WITNESS: Yes.

11
12 (Pages Deposition
13 Exhibit No. 6 was
14 marked for identification)

15 BY MR. DAVIS:

16 Q. I want to show you now what has been
17 marked as Deposition Exhibit 6, which is a chart
18 which states Toxic Agents in the Particulate
19 Matter of Cigarette Smoke, and I'll ask you to
20 look at that document, sir, and read down the
21 agents here if you will to yourself. But would
22 you tell us which agents you personally
23 recognize as agents that are, in fact, present
24 in the particulate matter of cigarette smoke?

25 MR. FIGARI: Objection. No showing

2017015349

1 of personal knowledge on the part of the witness.

2 MR. SCARBORO: Would you please
3 explain for the record, Mr. Davis, where that
4 particular document comes from, do you know?

5 MR. DAVIS: It came out of the stack
6 on top of my book right here.

7 MR. SCARBORO: Okay. I also object
8 that it's not clear whether the question is
9 asking the witness to testify about what he's
10 read, what he's heard, what he's seen, what he's
11 done. It's just not clear.

12 MR. DAVIS: I'm asking the witness
13 to identify those agents that he recognizes are
14 in the particulate matter of cigarette smoke.

15 MR. SCARBORO: As a matter of his
16 own personal knowledge.

17 MR. DAVIS: His knowledge, his
18 studies, what he knows about his company, his
19 position, his job.

20 MR. FIGARI: I'm going to object on
21 the grounds that it has not been established
22 that he has personal knowledge and further on
23 the grounds that it refers to cigarette smoke
24 generally and not cigarette smoke for the brand
25 at issue in this case.

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1 BY MR. DAVIS:

2 Q. Just identify those that you know
3 are believed to be agents in the particulate
4 matter of cigarette smoke.

5 MR. FIGARI: Same objection.

6 MR. SCARBORO: Lacks foundation.
7 Compound.

8 THE WITNESS: Well, first of all, I
9 have seen lists like this in documents like the
10 surgeon general's reports. So that's the kind
11 of document or compendium that I'm relying upon
12 to give you my answer. Yes, I have recognized
13 some of these compounds as having been reported
14 in cigarette smoke through surgeon general's
15 reports, the papers that are cited therein and
16 so on.

17 MR. FIGARI: I'm going to object to
18 the answer as nonresponsive. Move to strike.
19 And further on the basis that the answer reveals
20 that it's nothing but a regurgitation of hearsay
21 and move to strike on that ground as well.

22 BY MR. DAVIS:

23 Q. Are you telling us that Philip
24 Morris has not done any testing to identify the
25 particulate matter in cigarette smoke?

2017015351

1 A. To identify the particulate matter?

2 Q. Yes.

3 A. What does that mean? I don't
4 understand that.

5 Q. Are you telling us, sir, that Philip
6 Morris has not done any testing to identify the
7 agents that are in the particulate matter of
8 cigarette smoke?

9 A. Of course Philip Morris has done
10 analytical chemistry on particulate phase of
11 cigarette smoke.

12 Q. In fact, it works pretty much hand
13 in hand. You from time to time get briefings on
14 what they are doing, do you not?

15 A. Yeah. I say, yes.

16 Q. And can you, based upon your
17 knowledge of what they have found, identify some
18 of these agents as agents that your own company
19 has found?

20 MR. SCARBORO: Let me just ask for a
21 clarification. Are you asking him for his
22 recollections of what any internal studies that
23 Philip Morris may have found regarding the
24 presence of these substances in cigarette smoke?

25 MR. DAVIS: I think the question is

2017015352

1 very clear.

2 BY MR. DAVIS:

3 Q. I'm asking you: Can you identify
4 any agents on this document that you know from
5 studies done at Philip Morris have been
6 identified by Philip Morris as agents that are
7 in the particulate matter of smoke?

8 MR. SCARBORO: I'm just going to
9 object to the question that it is vague and
10 ambiguous, unclear. I don't know what you mean
11 by "identified by Philip Morris." Identified by
12 people or studies done at Philip Morris, that's
13 one thing. But identified by Philip Morris is
14 asking for some kind of representation made by
15 the company that I don't think is the situation
16 here.

17 BY MR. DAVIS:

18 Q. Can you answer the question, sir?

19 A. I can try.

20 Q. Would you, please?

21 A. If I think I understand it, and I
22 think I do. Yes, Philip Morris, for instance,
23 some of the first few compounds on this list are
24 of the class identified here as polynuclear
25 aromatic hydrocarbons. Yes, Philip Morris has

2017015353

1 done work to look at polynuclear aromatic
2 hydrocarbons in cigarette smoke, yes.

3 MR. FIGARI: Excuse me. I want to
4 object to the answer as being nonresponsive and
5 move to strike it.

6 BY MR. DAVIS:

7 Q. Has your company taken steps to
8 determine whether or not that agent is a tumor
9 initiator in animal studies?

10 A. Which agent?

11 Q. The one you just described.

12 A. Polynuclear aromatic hydrocarbons?

13 Q. Yes.

14 A. That's a class of compounds.

15 Q. Okay. Have you studied that class
16 of compounds to determine if they are tumor
17 initiators in animal studies?

18 A. We have used those kinds of
19 compounds in conjunction with some of the mouse
20 skin painting we have done. For instance, the
21 first one on the list has already been shown to
22 be a tumor initiator in studies published in the
23 literature under certain conditions in mouse
24 skin painting, yes.

25 MR. FIGARI: Objection. Nonresponsive.

2017015354

1 Move to strike.

2 BY MR. DAVIS:

3 Q. And would those agents be agents
4 that are found in all cigarettes as opposed to a
5 specific brand of cigarette?

6 MR. SCARBORO: Object. Lacks
7 foundation.

8 MR. FIGARI: Object. Seeks
9 speculation. No familiarity shown with other
10 brand of cigarettes.

11 BY MR. DAVIS:

12 Q. In your opinion.

13 MR. FIGARI: Objection. No
14 qualification.

15 THE WITNESS: I'm not sure. I
16 suppose so.

17 BY MR. DAVIS:

18 Q. Okay. In all reasonable probability
19 would you assume or believe that they were
20 present in all cigarettes?

21 MR. SCARBORO: Object. Lacks
22 foundation. The qualifications of the witness
23 to answer that question have not been shown.

24 MR. FIGARI: Objection. Compound.
25 Objection. Seeks assumption. Objection. Seeks

2017015355

1 speculation.

2 THE WITNESS: Yes.

3 BY MR. DAVIS:

4 Q. Okay. Based upon your answers,
5 would it be a correct conclusion then that there
6 are agents in the particulate matter of Pall
7 Mall cigarettes, Marlboro cigarettes that are in
8 fact tumor initiators in mice studies?

9 MR. SCARBORO: Object. Asked and
10 answered. The witness has already testified he
11 doesn't know.

12 MR. FIGARI: Objection. No showing
13 of personal knowledge. Objection. No
14 qualification. Objection. Seeks speculation
15 too.

16 BY MR. DAVIS:

17 Q. You may answer.

18 A. Could you repeat it one more time,
19 please?

20 Q. Would you then conclude that there
21 are, in fact, tumor initiator agents in Marlboro
22 cigarettes and in Pall Mall cigarettes?

23 MR. SCARBORO: Same objection.

24 MR. FIGARI: Same objection and also
25 add indefinite to time.

2017015356

1 THE WITNESS: As long as it's clear
2 that when you talk about tumor initiators, you
3 are talking about mouse skin painting and who
4 knows what relevance that has to human smoking,
5 yes.

6 BY MR. DAVIS:

7 Q. I want to ask you the relationship
8 between mouse skin painting and humans as you
9 perceive it. Do you believe from a scientific
10 viewpoint that mouse skin paintings have some
11 validity in predicting whether or not a given
12 substance or agent will have an effect on human
13 tissue?

14 MR. FIGARI: Objection. No
15 qualification.

16 THE WITNESS: No.

17 BY MR. DAVIS:

18 Q. Sir?

19 A. No. It would be going-- it would be
20 conceding a lot on my part to say that it would
21 have any meaningful relevance whatsoever. It's
22 mouse, not man. It's skin, not lung. It's
23 smoke condensate, not cigarette smoke. I don't
24 think it has much relevance at all to human
25 smoking.

2017015357

1 Q. Could you give us an estimate of the
2 approximate amount of money that your company
3 spends annually on these studies?

4 A. No, I don't think I can.

5 Q. Is it in excess of \$100,000?

6 MR. MARONEY: Objection. No
7 foundation.

8 THE WITNESS: I don't know what it
9 is.

10 BY MR. DAVIS:

11 Q. What I'm trying to find out is, why
12 is your company spending these monies for these
13 studies?

14 MR. SCARBORO: This question has
15 been asked at least three times and answered by
16 the witness at least three times.

17 BY MR. DAVIS:

18 Q. And what you are telling us is it
19 has absolutely nothing to do with whether or not
20 any of these substances or agents have any
21 harmful effect on human beings. Is that what
22 you are telling us?

23 A. Well, you are categorizing it I
24 think a little bit strongly. I think I would be
25 willing to say what relevance it has, nobody

2017015358

1 knows. But it can't possibly be much relevance
2 because of the reasons I have already indicated
3 to you: mouse, not man; skin, not lung. And
4 it's the wrong kind of material.

5 Q. Is Philip Morris just interested in
6 researching mouse cancers?

7 MR. SCARBORO: Object. Lacks
8 foundation.

9 BY MR. DAVIS:

10 Q. You don't have as your purpose
11 saving mice lives, do you?

12 MR. SCARBORO: Object. Arguing with
13 the witness.

14 MR. DAVIS: All right.

15 MR. SCARBORO: The witness has
16 already testified about this.

17 BY MR. DAVIS:

18 Q. Do you know when your company first
19 learned that the agents that are present in
20 particulate matter of cigarettes smoke existed?

21 MR. SCARBORO: Would you repeat the
22 question? I'm sorry.

23 BY MR. DAVIS:

24 Q. Do you know at what point in time
25 your company learned of the presence of these

2017015359

1 agents in particulate matter of cigarette smoke?

2 MR. SCARBORO: Object. Lacks
3 foundation.

4 MR. FIGARI: Object. Seeks
5 speculation.

6 THE WITNESS: No.

7 BY MR. DAVIS:

8 Q. Do you believe it was before you
9 came to the company?

10 MR. SCARBORO: Object. Asked and
11 answered. He's already said he didn't know.

12 MR. FIGARI: Same objection.

13 MR. SCARBORO: Lacks foundation.

14 THE WITNESS: For some, maybe yes
15 and some maybe no. I don't know.

16 BY MR. DAVIS:

17 Q. Has there been any big event, any
18 celebration about discovering some of these
19 particulate matter, these agents?

20 A. I don't understand what you mean, a
21 big celebration.

22 Q. Well, you don't know when you
23 discovered them. I'm just wondering if maybe
24 during the lab one day somebody came in and said,
25 "Look what I have found. We have now found some

2017015360

1 carcinogens to animals in cigarette smoke."

2 Does anything like that ever happen?

3 A. No.

4 Q. To your knowledge has Philip Morris
5 ever issued any warnings to consumers that any
6 of the agents identified on Exhibits 5 or 6 were
7 present in their cigarette products?

8 MR. SCARBORO: Object. Lacks
9 foundation.

10 THE WITNESS: Any warnings?

11 BY MR. DAVIS:

12 Q. Yes.

13 A. Well, one of the agents here is one
14 of the current rotating warnings.

15 Q. Which is that?

16 A. Carbon monoxide.

17 Q. Okay. Is that a warning that your
18 company voluntarily placed on the package?

19 MR. SCARBORO: Object. Lacks
20 foundation. Arguing with the witness.

21 THE WITNESS: I don't understand
22 that. We're complying with the law that
23 requires that be one of the four rotating
24 warnings.

25 BY MR. DAVIS:

2017015361

1 Q. Would your company put those
2 warnings on those packages if you weren't
3 required by law?

4 A. I don't know.

5 Q. Does your company sell cigarettes
6 overseas?

7 A. Yes.

8 Q. Do they place warnings on packages
9 sold overseas?

10 MR. SCARBORO: Object. Lacks
11 foundation.

12 THE WITNESS: Yes.

13 BY MR. DAVIS:

14 Q. Do they place them on cigarettes
15 sold in countries where those countries don't
16 require warnings?

17 MR. SCARBORO: Same objection.

18 THE WITNESS: I'm not really sure.
19 I don't know.

20 BY MR. DAVIS:

21 Q. You have never heard anyone discuss
22 whether or not your company places warnings on
23 cigarette packages in countries that don't
24 require them?

25 A. No, I have never heard anyone

2017015362

1 discuss that.

2 Q. Do you believe it would be good
3 corporate responsibility to place those warnings
4 on cigarette packages--

5 MR. SCARBORO: Object.

6 BY MR. DAVIS:

7 Q. -- irrespective of any regulatory
8 requirement?

9 MR. SCARBORO: Object. Lacks
10 foundation. The witness is not qualified to
11 answer that question and it calls for
12 speculation.

13 BY MR. DAVIS:

14 Q. What is your opinion?

15 A. I don't feel qualified to answer
16 that question. I mean warning labels is not
17 something I know much about.

18 Q. Have you had an occasion to know a
19 Dr. Victor De Noble?

20 A. Yes.

21 Q. Would you tell the jury, please,
22 what the context of that relationship is, or was?

23 A. Oh, yes. He and I were both
24 employed in the research and development
25 department, or working in the research and

2017015363

1 development department for a period of some
2 years.

3 Q. What type of a reputation did Dr. De
4 Noble enjoy while he was with your company among
5 your employees?

6 MR. SCARBORO: Object. Lacks
7 foundation. Calls upon the witness to comment
8 upon the credibility of another witness.

9 MR. FIGARI: I'm going to object on
10 the grounds that you haven't shown he is
11 familiar with the fact of reputation of that
12 particular individual within the company.

13 BY MR. DAVIS:

14 Q. Are you familiar with his general
15 reputation in the company?

16 MR. MARONEY: Same objection.

17 MR. SCARBORO: Same objections.

18 THE WITNESS: When you say
19 reputation, you are asking me I guess to
20 characterize how, say, 200 other scientists at
21 R & D, what they thought of Vic De Noble and,
22 you know, you would have to ask them. I don't
23 know. I can tell you what I know personally,
24 but that's all.

25 BY MR. DAVIS:

2017015364

1 Q. Tell me what you know personally.

2 A. Well, I knew Vic reasonably well,
3 and, yes, I thought he was a good scientist
4 doing very interesting work, and I think he was
5 a little impetuous at times, but I generally
6 thought he was a good scientist.

7 Q. What do you mean by impetuous?

8 A. At times he felt, and he told me so,
9 that he felt frustrated over some actions that
10 R & D management had taken with respect to
11 certain things he wanted to publish, for
12 instance, and that sort of thing.

13 Q. Okay. Was he a hard worker?

14 A. Yes. I think so.

15 Q. Good administrator in his department?

16 MR. SCARBORO: Object. Lacks
17 foundation.

18 THE WITNESS: I have no way of
19 knowing that, if he was a good administrator.
20 I'm not exactly sure what you mean by that
21 either. So I don't know what you mean.

22 BY MR. DAVIS:

23 Q. What type of work was Dr. De Noble
24 doing at Philip Morris R & D?

25 A. Dr. De Noble was trained in the area

2017015365

1 of psychology, experimental psychology. He was
2 by virtue of his experience and training skilled
3 in the application of techniques which seek to
4 study the effects of materials on animal
5 behavior. And he had done work prior to coming
6 to Philip Morris, my recollection is with
7 certain types of animals, and while he was at
8 Philip Morris, he studied rat behavior.

9 Q. What particular aspect of rat
10 behavior was he studying?

11 A. Well, this behavior was generally
12 the kind that is manifested by rats who are
13 trained to press levers in boxes, which are
14 commonly called, I think, Skinner cages or
15 Skinner boxes after the man who developed the
16 technique.

17 Q. What substance and the effect of
18 that substance was he testing?

19 A. He was evaluating a lot of different
20 substances.

21 Q. Any in particular?

22 A. Any in particular? Yes, he did some
23 work with pollutant water, nicotine, yes.

24 Q. What work was he doing with nicotine?

25 A. He did a series of experiments on

2017015366

1 nicotine to see what effects it would have in
2 various types of experimental setups and its
3 effect on rat lever pressing behavior.

4 Q. And what were the results of those
5 studies?

6 MR. SCARBORO: Object. Lacks
7 foundation.

8 MR. FIGARI: Objection. Seeks
9 speculation and hearsay.

10 THE WITNESS: I don't want to guess
11 at the results. If you have a specific area or
12 question that you want me to see if I can
13 remember about, I'll be more than happy to try
14 to answer. But I don't want to try to
15 characterize all of Dr. De Noble's work. He
16 worked on a lot of different projects and
17 experiments while he was there, and I don't feel
18 comfortable just off the cuff trying to sum up
19 my memory to characterize all the things he did
20 and found.

21 BY MR. DAVIS:

22 Q. Okay. Were you the person that had
23 the responsibility of reporting to management
24 the ongoing results of Dr. De Noble's testing?

25 A. No.

2017015367

1 Q. Who had that responsibility?

2 MR. SCARBORO: If you know.

3 THE WITNESS: Dr. De Noble himself,
4 I believe.

5 BY MR. DAVIS:

6 Q. Okay. Did you act as any type of
7 intermediary in any meetings explaining to upper
8 level management either in Virginia or in New
9 York what the results of his studies had
10 determined or where they were headed?

11 A. No.

12 Q. Did you ever make any type of a
13 presentation to anyone in New York concerning
14 his studies?

15 A. No.

16 Q. Did you ever attend any meetings
17 concerning his studies in New York?

18 A. No.

19 Q. In Virginia?

20 A. Yes.

21 Q. Did you play any part in the
22 decision to shut down Dr. De Noble's lab?

23 A. No.

24 Q. Tell us why his lab was shut down.

25 MR. SCARBORO: Object. Lacks

201,015368

1 foundation.

2 THE WITNESS: I can only tell you
3 what I was told.

4 BY MR. DAVIS:

5 Q. That's fine.

6 A. First of all, it's a
7 mischaracterization to talk about shutting down
8 Dr. De Noble's lab in isolation. In fact, what
9 transpired was an entire research program was
10 terminated. And part of that research program
11 was the work being done in Dr. De Noble's lab.
12 What I was told about the reason for that action,
13 terminating this research program, was that it
14 was viewed as a long-term basic research program
15 not likely to yield any information of value to
16 the company in the design of potential new
17 products in the foreseeable future, and they did
18 not feel it justified to continue to invest
19 money to support this program.

20 Q. And who told you that?

21 A. That is my boss, Dr. Thomas S.
22 Osdene.

23 Q. Was Dr. Osdene the person that went
24 down and locked up Dr. De Noble's lab?

25 MR. SCARBORO: Object.

2017015369

1 Mischaracterizes the evidence and lacks
2 foundation.

3 BY MR. DAVIS:

4 Q. Let me back up this way. Did
5 somebody on a given day simply walk down and
6 lock up Dr. De Noble's lab?

7 A. I don't know.

8 Q. Would that be the normal way test
9 programs are terminated at Philip Morris?

10 MR. SCARBORO: Object. Lacks
11 foundation.

12 THE WITNESS: I don't think so.

13 BY MR. DAVIS:

14 Q. When test programs are terminated at
15 Philip Morris, do you normally prohibit the
16 investigator from having access to his notes and
17 records after it's terminated?

18 MR. SCARBORO: Same objection.

19 THE WITNESS: No.

20 BY MR. DAVIS:

21 Q. If Dr. De Noble has testified he was
22 prohibited from having access to his notes and
23 records, do you have any explanation for why
24 that would have been?

25 MR. SCARBORO: Object. Calls for

2017015370

1 speculation. Assumes facts not in evidence.

2 THE WITNESS: I don't want to
3 speculate on that, because I have no personal
4 knowledge of that.

5 BY MR. DAVIS:

6 Q. Do you know that Dr. De Noble had
7 identified acetaldehyde in combination with
8 nicotine as being a very strong reinforcer?

9 A. I don't know about the word "strong."
10 Strong is a relevant term. It needs to be
11 defined, but, yes, Vic De Noble had carried out
12 experiments and was just beginning to really
13 investigate combinations of nicotine and
14 acetaldehyde for their reinforcing behavior on--
15 in his rats.

16 Q. And what was he finding, as best you
17 recall?

18 MR. SCARBORO: Object. Lacks
19 foundation.

20 THE WITNESS: As best I can recall,
21 he had already established that nicotine was a
22 reinforcer in rats. He had established that
23 acetaldehyde was also a reinforcer in rats, and
24 he had begun some experiments whose preliminary
25 results suggested that when the two compounds

2017015371

1 were administered together, their effect was
2 greater than either separately.

3 BY MR. DAVIS:

4 Q. Are both of those compounds present
5 in cigarette smoke?

6 A. Yes.

7 MR. SCARBORO: Object. Lacks
8 foundation.

9 BY MR. DAVIS:

10 Q. I want to show you a document which
11 was identified at the taking of Dr. De Noble's
12 deposition and which we will mark as deposition
13 Exhibit No. 7.

14
15 (Pages Deposition
16 Exhibit No. 7 was
17 marked for identification)

18 BY MR. DAVIS:

19 Q. Have you had an opportunity to see
20 that document before the deposition today?

21 MR. SCARBORO: Object. I'm going to
22 instruct the witness not to answer.

23 BY MR. DAVIS:

24 Q. I'm going to ask for an answer to
25 that question, and if you choose, you will, of

2017015372

1 course, follow counsel's advice. Are you going
2 to follow counsel's advice and not answer
3 whether or not you have seen that document
4 before this deposition?

5 MR. SCARBORO: May I have a moment,
6 please?

7 (Discussion off the record.)

8 MR. SCARBORO: Back on the record.
9 I will permit the witness to answer that
10 question I think as you phrased it, had you seen
11 it before.

12 THE WITNESS: Please restate it.

13 BY MR. DAVIS:

14 Q. Have you had an opportunity to
15 review this exhibit?

16 A. Yes, I was shown this exhibit, yes.

17 Q. In that exhibit, there is a
18 statement-- and let me back up. Can you
19 identify the handwriting on that?

20 A. I think so.

21 Q. Whose is it?

22 A. I believe it's Ms. Judith Ware.

23 Q. Okay. The statement is made that
24 data for acetaldehyde and nicotine predict sales
25 at 96 percent accuracy. Then the sentence under

2017015373

1 that says, "Additive effects accounts for 96
2 percent sales." Did I read those two sentences
3 correctly?

4 A. Uh-huh. Yes, you read them
5 correctly.

6 Q. What does that mean to you?

7 MR. FIGARI: Objection. Seeks
8 speculation and conclusion.

9 THE WITNESS: What this means to me
10 is that I am aware of a-- I won't call it a
11 study, but a chart that I once saw presented at
12 a project review in which Mr. Frank Ryan had
13 taken published figures on nicotine delivery of
14 a number of brands of cigarettes, and I don't
15 even know how many brands it was, and the
16 published figures on their annual sales. And
17 somehow or other he had gotten information
18 regarding their acetaldehyde deliveries. And
19 for some number of brands of cigarettes he
20 showed a graph in which he plotted some, and I
21 don't remember the details, some function of
22 acetaldehyde/nicotine delivery versus annual
23 sales. And he said, "Gee, look at this. We
24 have a very high correlation between those two,
25 these phenomena."

2017015374

1 MR. FIGARI: Excuse me. Object.

2 Nonresponsive. Move to strike.

3 BY MR. DAVIS:

4 Q. Is that high correlation what is
5 recorded as 96 percent accuracy?

6 MR. FIGARI: Objection. Seeks
7 speculation.

8 MR. SCARBORO: Yes, calls for the
9 the witness to interpret a document that has not
10 been established that he has any familiarity
11 with the document.

12 BY MR. DAVIS:

13 Q. Do you recall that being the figure
14 used, 96 percent accuracy?

15 A. Yes.

16 Q. Did your company try to utilize the
17 information developed by Dr. De Noble in any way
18 that you are aware of?

19 MR. SCARBORO: Objection. Lacks
20 foundation. Vague and ambiguous.

21 THE WITNESS: No.

22 BY MR. DAVIS:

23 Q. Is acetaldehyde in nicotine
24 something that a company such as Philip Morris
25 can regulate the content in a cigarette?

2017015375

1 A. Well, first of all, we're not
2 talking about a cigarette. We're talking about
3 smoke.

4 Q. Yes, I'm sorry. Thank you for
5 correcting me.

6 A. Yes, to some extent of course. Tar
7 and nicotine values, we can produce cigarettes
8 of varying tar and nicotine deliveries, and
9 there's one component already. I'm not sure
10 about acetaldehyde. Perhaps there's something
11 that can be done on that. I just don't know.

12 Q. Okay. Would it be advantageous to
13 cigarette manufacturers for-- let me withdraw
14 that question. Is there any detriment that you
15 see to Philip Morris of Dr. De Noble's findings
16 being made public?

17 MR. SCARBORO: Object. Lacks
18 foundation. The witness has already testified
19 he doesn't know in detail about De Noble's
20 results, and it calls for speculation.

21 THE WITNESS: What findings?

22 BY MR. DAVIS:

23 Q. That there is a combined effect of
24 nicotine and acetaldehyde that produces a strong
25 reinforcing effect.

2017015376

1 MR. SCARBORO: Same objections.

2 Lack of qualifications on the part of the
3 witness. Calls for speculation.

4 THE WITNESS: I can't be sure about
5 that because my recollection is that Dr.
6 De Noble had really only begun these studies,
7 and they were not at a stage where they were
8 definitive or reproducible or anything like that.
9 So I'm not sure that what is implied here is a
10 hard and fast piece of result. It may be just
11 very preliminary data. I just don't remember at
12 what stage his work was. My recollection is it
13 wasn't a completed study at all.

14 BY MR. DAVIS:

15 Q. From your knowledge as a scientist,
16 would the information being generated by Dr.
17 De Noble's study shed light on whether or not
18 cigarettes were addicting?

19 MR. SCARBORO: Object. Lacks
20 foundation. Lacks qualification.

21 MR. FIGARI: I'm going to object on
22 the grounds that there's no qualification. I'm
23 going to object further on the grounds that you
24 have not established of this witness his
25 familiarity with the findings of Dr. De Noble on

2017015377

1 that point and object further on the grounds
2 that it seeks speculation.

3 THE WITNESS: I don't know how to
4 answer your question because you used the term
5 addicting, and that's a term that there really
6 is no generally agreed upon scientific
7 definition of that term. So, you know, I don't
8 know to what exactly you are referring to.

9 BY MR. DAVIS:

10 Q. Are cigarettes addicting?

11 MR. SCARBORO: Object. Lacks
12 foundation. Lacks qualification. Asked and
13 answered.

14 THE WITNESS: There's no definition
15 to that term, so I don't know the answer to that.

16 BY MR. DAVIS:

17 Q. Okay. Would it be detrimental to
18 Philip Morris if a study done in its own
19 laboratory established addicting qualities of
20 its product?

21 MR. SCARBORO: Objection. Calls for
22 the witness to speculate.

23 THE WITNESS: I don't know.

24 MR. SCARBORO: Lacks foundation.
25 Assumes facts not in evidence. Misstates the

2017015378

1 evidence, mischaracterizes the results of Dr.
2 De Noble's work, assumes a familiarity with Dr.
3 De Noble's work that the witness doesn't have.

4 MR. DAVIS: And we're reserving
5 objections except to form.

6 MR. SCARBORO: Well, we do our best.

7 BY MR. DAVIS:

8 Q. Was Dr. De Noble called to New York
9 to explain the preliminary results of this study
10 to your knowledge?

11 A. I don't know.

12 Q. Dr. Osadene never did discuss what
13 occurred in New York with you?

14 A. No.

15 Q. You have no knowledge of any meeting
16 that occurred in New York.

17 A. No.

18 Q. What other program was terminated
19 besides Dr. De Noble's program?

20 A. I told you the program that was
21 terminated was something he called nicotine
22 program. Dr. De Noble, his laboratory was
23 involved in one component of that program. The
24 whole program was terminated, and so for
25 instance, there were a large number-- there

2017015379

1 were a number of organic chemists involved in
2 this program and they too began to work-- they
3 began to work on other things. They didn't work
4 on what they had been working on.

5 Q. Okay. Dr. De Noble's program had a
6 charge number I believe of 1610, behavioral
7 pharmacology. Does that sound accurate?

8 A. That's a number you used before, and
9 I didn't recall it. That could be. I don't
10 know.

11 Q. Okay. Is it your testimony that it
12 was not just charge number 1610 that was
13 canceled entitled behavior pharmacology, but an
14 entire series of studies that were being done
15 that were canceled in addition to this?

16 A. That's correct.

17 Q. Okay. Can you tell us which other
18 studies were canceled?

19 A. As I just told you, there were a
20 large number of organic chemists involved in
21 this project, and when this program was
22 terminated, they began to work on other things.

23 Q. Okay.

24 A. We also had some work going on
25 elsewhere which was also terminated.

2017015380

1 Q. Okay. And to make sure the record
2 is clear, I want you to state again why the
3 program was terminated.

4 MR. SCARBORO: Object. Asked and
5 answered.

6 THE WITNESS: I think I already
7 testified that Dr. Osdone told me that it had
8 been viewed by Philip Morris management that
9 further commitments of funds to this whole
10 program were not good business sense in the
11 future because it wasn't going to be leading to
12 anything that the company could utilize in the
13 development of potential new products in the
14 foreseeable future, and they didn't want to
15 commit any further funds.

16 BY MR. DAVIS:

17 Q. Did anyone ever tell you it's not
18 good business sense because it might establish
19 that cigarettes are addictive?

20 A. No, no one ever told me that.

21 Q. What was the initial purpose of
22 testing nicotine on rats as Dr. DeNoble was
23 doing?

24 MR. SCARBORO: Object. Lacks
25 foundation.

2017015381

1 THE WITNESS: I'm not sure.

2 BY MR. DAVIS:

3 Q. Okay. Who is Rayfields Dawson?

4 A. He's a person that was for a period
5 of time employed as a consultant to Philip
6 Morris research and development.

7 Q. Okay. Is he still employed in that
8 capacity to your knowledge?

9 A. Not to my knowledge, no.

10 Q. Is he an independent consultant to
11 the tobacco industry or just in pharmacological
12 behavior, or do you know?

13 A. Neither.

14 Q. What is his field?

15 A. Botany, I believe.

16 Q. Okay.

17 A. Botany, plants.

18 Q. Do you know where he resides?

19 A. Somewhere in Florida currently.

20 Q. I want to show you a document which
21 we'll mark as Deposition Exhibit No. 8.

22

23 (Pages Deposition
24 Exhibit No. 8 was
25 marked for identification)

2017015382

1 BY MR. DAVIS:

2 Q. It's entitled report on trip to
3 Philip Morris research center, February 26 and
4 27, 1981. Does that document have your name on
5 it as being one of the people that participated?

6 A. May I look at the document?

7 Q. Please (indicating).

8 A. Well, my name certainly appears at
9 the top of the document.

10 Q. Does that indicate that discussions
11 were held with you in conjunction with other
12 people concerning that field trip?

13 A. The way-- Dr. Dawson would come to
14 Philip Morris for a day or two from time to time,
15 and a schedule would be set up such that he
16 would spend an hour with person "x" and the next
17 hour with person "y" and so on. My recollection
18 is that I never met with Dr. Dawson in the
19 presence of more than one other individual, but
20 usually it was just one on one.

21 Q. And what was Dr. Dawson's function?
22 Why was he coming around visiting the various
23 department?

24 A. That's a darn good question. I
25 asked myself that many times. I never really

2017015383

1 quite knew that.

2 Q. Just sort of a phantom guy that
3 showed up?

4 MR. SCARBORO: Object. Asked and
5 answered.

6 THE WITNESS: I can only speculate
7 on that. Obviously I was not authorizing his
8 payments to come around and visit Philip Morris.
9 Somebody at Philip Morris research and
10 development management must have thought his
11 visits were useful. I don't know.

12 BY MR. DAVIS:

13 Q. You never quite shared that view
14 apparently.

15 A. No, that's right. I never did.

16 Q. Okay. This document, Exhibit 8,
17 says that formation of policy and direction
18 under the management of T. Sanders is evolving
19 and perhaps this rethink comes at a propitious
20 time, namely the new perceived, although
21 frequently discussed, problem of side stream
22 smoke. Did you ever enter into any discussions
23 with Dr. Dawson about side stream smoke?

24 MR. SCARBORO: Could we just have
25 that be the question without the narrative?

2017015384

1 Could we have just the question be-- do you have
2 to read the document first and then ask him
3 about it?

4 MR. DAVIS: Right.

5 MR. SCARBORO: I move to strike all
6 that prefatory material. It's not part of the
7 question, not in evidence.

8 THE WITNESS: I can't recall ever
9 discussing side stream smoke with Dr. Dawson.

10 BY MR. DAVIS:

11 Q. Did you ever discuss side stream
12 smoke with anyone at Philip Morris?

13 A. Sure.

14 Q. What kind of questions were being
15 raised about side stream smoke?

16 A. When?

17 Q. At any time that you can recall
18 discussing it.

19 A. Well, there could have been
20 questions about what someone had reported in the
21 literature or what-- I don't know how to answer
22 that question. It needs a context. I mean it
23 could be what is in side stream smoke or how
24 much or who knows. It could be very many
25 different things.

2017015385

1 Q. Did anyone raise the question that
2 polonium might be in side stream smoke?

3 A. Did anyone ever raise that question?

4 Q. Yes.

5 A. Where?

6 Q. At Philip Morris.

7 A. I don't know.

8 Q. This document states "the newly
9 raised polonium question re sidestream smoke
10 should be approached with great caution." Did
11 anyone at Philip Morris ever tell you we have
12 got to approach polonium in side stream with
13 great caution?

14 MR. SCARBORO: Same objection. Move
15 to strike all that prefatory material and get to
16 the question.

17 THE WITNESS: No.

18 BY MR. DAVIS:

19 Q. On the second page of this document
20 the statement is made that some time was spent
21 in discussing the source of nitrosamines found
22 in tobacco before the product is smoked. Has
23 that ever been a subject of investigation by you?

24 MR. SCARBORO: Same objection.

25 THE WITNESS: No. Not me personally.

2017015386

1 BY MR. DAVIS:

2 Q. Have you discussed that question
3 with people at Philip Morris?

4 A. Yes.

5 Q. And what conclusions do you recall
6 having been reached as to the source of
7 nitrosamines that are found in tobacco before
8 the product is smoked?

9 MR. SCARBORO: Object. Lacks
10 foundation or qualification.

11 THE WITNESS: First of all, there
12 are published papers regarding this in the open
13 scientific literature which I have read and I'm
14 generally familiar with. And those conclusions
15 are that nitrosamines in tobacco arise in the
16 tobacco in the course of curing, tobacco curing.

17 BY MR. DAVIS:

18 Q. Okay. And are these the same
19 nitrosamines that are carcinogenic when used in
20 animal painting studies, rat painting studies?

21 A. No.

22 Q. These are different ones?

23 A. The nitrosamines are generally not
24 active by the mouse thermal, mouse skin painting
25 route of administration. They generally do not

2017015387

1 produce mouse skin tumors when they are painted
2 on the back of a mouse, so they are not
3 carcinogenic by that criteria.

4 Q. Are they promoters?

5 A. No, I'm aware of no evidence to
6 suggest that nitrosamines are promoters in mouse
7 skin painting bioassay.

8 Q. Are they cilia toxic agents?

9 A. Again, I'm aware of no evidence to
10 suggest that nitrosamines affect cilia activity
11 in any way, shape or form.

12 Q. Okay. Do you know of any evidence
13 from any source that nitrosamines in cigarette
14 smoke might in some way harm the lungs or the
15 lung tissue in humans?

16 A. No.

17 Q. Okay. Did you ever enter into any
18 discussions with anyone at Philip Morris that
19 there was sort of a gentleman's agreement that
20 cigarette companies would not do any biological
21 testing?

22 A. I heard that, yes.

23 Q. Did you feel like the work that was
24 being done at Philip Morris was in violation of
25 that agreement?

2017015388

1 A. No, what I heard, and this is only
2 what I was told, was that there was some
3 understanding that the company should not do
4 animal experimentations in their own research
5 facilities, like for instance, Philip Morris
6 research and development department in Richmond,
7 Virginia. That's what I was told.

8 MR. FIGARI: Objection. Nonresponsive.
9 Move to strike.

10 BY MR. DAVIS:

11 Q. Do you know what the basis for that
12 agreement was, why that agreement was made?

13 A. No, I do not.

14 Q. Was there a desire at Philip Morris
15 to not perform any type of studies which might
16 show a bridge between reactions at the molecular
17 level and biological activity?

18 MR. SCARBORO: Object. Lacks
19 foundation. Vague and ambiguous.

20 THE WITNESS: I'm not sure I
21 completely understand your question, but, no,
22 I'm not aware of any.

23 Could we take a short break?

24 MR. DAVIS: Sure.

25 (Discussion off the record.)

2017015389

1 MR. MARONEY: This concludes the
2 deposition, to be resumed in Virginia.

3 MR. DAVIS: We're continuing the
4 deposition, to be resumed.

5
6 (DEPOSITION RECESSED)
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2017015390

1 STATE OF _____)

2)

3 COUNTY OF _____)

4 SUBSCRIBED AND SWORN TO BEFORE

5 me by the said witness, _____, on

6 this the _____ day of _____

7 A. D., 1988.

8 _____
9
10 Robert Alex Pages

11
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13 _____
14 Notary Public in and for
15 _____ County, _____
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2017015391

NO. 398,250

PHILLIS T. ROTHGEB, IN THE DISTRICT COURT
ET AL

VS. TRAVIS COUNTY, TEXAS

THE AMERICAN TOBACCO
COMPANY, ET AL 261ST JUDICIAL DISTRICT

DEPOSITION OF ROBERT ALEX PAGES

I, SALLY A. KING, Certified Shorthand
Reporter, State of Texas, do hereby certify in
accordance with Rule 206-1 (i-viii) as follows:

- (i) The witness was duly sworn by me.
- (ii) The transcription is a true record
of the testimony given by the witness.
- (iii) The original costs of this deposition
are \$ 842.⁵⁵, charged to Philip Morris.
- (iv) The deposition was submitted to the
witness, or his attorney of record, for
signature on 10/3/89.
- (v), (vi),
(vii) (Waived by agreement of attorneys).
- (viii) A copy of this certificate has been
provided to all parties of record
pursuant to Texas Rules of Civil
Procedure 21a.

Sally A. King
SALLY A. KING, CSR
Certificate No. 2299

Expiration Date: 12-31-89

KORNEGAY-CARROLL & ASSOCIATES, INC.
106 E. 6th Street, Suite 350
Austin, Texas 78701 (512) 476-3967

2017015392